



**A BILL TO REGULATE THE SALE OF POISONS,
AND ALTER AND AMEND THE PHARMACY ACT,
1852.**

WHEREAS it is expedient for the safety of the public that persons keeping open shop for the retailing, dispensing, or compounding of poisons, or for the compounding the prescriptions of duly qualified medical practitioners, and commonly known as Chemists and Druggists, should possess a competent practical knowledge of their business, and to that end, that from and after the day herein named all persons not already engaged in such business should, before commencing such business, be duly examined as to their practical knowledge, and that a register should be kept as herein provided, and also that the Act passed in the fifteenth and sixteenth years of the reign of Her present Majesty, entitled "An Act for Regulating the Qualification of Pharmaceutical Chemists," hereinafter described as the Pharmacy Act should be amended: Be it enacted, by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal and Commons in this present Parliament assembled, and by authority of the same:

Persons selling Poisons or compounding Prescriptions to be qualified.

1. From and after the 31st day of December, 1867, it shall be unlawful for any person to keep open shop for retailing, dispensing, or compounding poisons, or for compounding the prescriptions of duly qualified medical practitioners, or to assume or use the title "Chemist and Druggist" or Chemist or Druggist in any part of Great Britain unless such person shall be a Pharmaceutical Chemist, or a Chemist and Druggist within the meaning of this Act.

Poisons within the meaning of Act.

2. The several articles named or described in the Schedule A shall be deemed to be poisons within the meaning of this Act, and the Council of the Pharmaceutical Society of Great Britain (hereinafter referred to as the Pharmaceutical Society) may, from time to time, by resolution declare, that any article in such resolution named ought to be deemed a poison within the meaning of this Act; and thereupon the Registrar hereinafter named shall submit such resolution to the Medical Council, and if the Medical Council shall resolve that such resolution ought to be confirmed, the said Registrar shall then submit the same for the approval of one of Her Majesty's Principal Secretaries of State, and if such approval shall be given, then such resolution, confirmation, and approval shall be advertised in the *London Gazette*, and on the expiration of one month from such advertisement, the article named in such resolution shall be deemed to be a poison within the meaning of this Act.

Chemists and Druggists within the meaning of Act.

3. Chemists and Druggists within the meaning of this Act shall consist of all persons who, at any time heretofore, have carried on, in Great Britain, the business of a Chemist and Druggist, in the keeping of open shop for the compounding of the prescriptions of duly qualified medical practitioners, also of all Assistants and Associates duly registered under or according to the provisions of the Pharmacy Act, and also of all such persons as may be duly registered under this Act.

Apprentices and Assistants to be registered.

4. Any person who, for two years prior to the time of passing this Act, shall have been apprentice to, or who, at the time of the passing of this Act, shall be of full age and shall have been actually engaged and employed in dispensing and compounding prescriptions, as Assistant to any Pharmaceutical Chemist, or any such Chemist and Druggist as defined by clause 3 hercof, may, on

transmitting to the Registrar, before the 31st day of December, 1868, Certificates, according to the Schedules D and E to this Act, be registered under this Act.

5. Such of the Chemists and Druggists, defined by clause 3, as may, on or before the 31st day of December, 1868, by notice in writing, signed by them, and given to the Registrar, request to be registered under this Act, shall, on production of Certificates according to the Schedules C and D to this Act, be registered accordingly.

Chemists and Druggists in business may be registered.

6. All such persons as shall from time to time have been appointed to conduct examinations under the Pharmacy Act, shall be, and are hereby declared to be examiners for the purposes of this Act, and are hereby empowered and required to examine all such persons as shall tender themselves for examination under the provisions of this Act, and every person who shall have been examined by such examiners, and shall have obtained from them a certificate of competent skill and knowledge and qualification, shall be entitled to be registered under this Act, and the examination aforesaid shall be such as is provided under the Pharmacy Act for the purposes of a qualification to be registered as Assistant under that Act, or as the same may be varied from time to time by any bye-law to be made in accordance with the Pharmacy Act, with the approbation of one of Her Majesty's principal Secretaries of State.

Examiners under Pharmacy Act to be the examiners under this Act. Certificate of competent skill, &c.

7. Such fees shall be payable upon every such examination and registration as aforesaid, as shall from time to time be fixed and determined by any bye-law, to be made in accordance with the Pharmacy Act, with the approbation of one of Her Majesty's principal Secretaries of State, and shall be paid to the Treasurer of the said Society, for the purposes of the said Society.

Application of Fees to purpose of Pharmaceutical Society.

8. The Registrar appointed, or to be appointed, under or by virtue of the Pharmacy Act, shall be Registrar for the purposes of this Act.

Registrar under Pharmacy Act to be Registrar under this Act.

9. The Council of the Pharmaceutical Society shall, with all convenient speed, after the passing of this Act, and from time to time, as occasion may require, make orders or regulations for regulating the Register, to be kept under this Act as nearly as conveniently may be in accordance with the form set forth in the Schedule B, to this Act or to the like effect, and such Register shall be called the Register of Chemists and Druggists.

Council of Pharmaceutical Society to make orders for regulating Register to be kept.

10. It shall be the duty of the Registrar to make and keep a correct Register, in accordance with the provisions of this Act, of all persons who shall be entitled to be registered under this Act, and to erase the names of all registered persons who shall have died, and from time to time to make the necessary alterations in the addresses of the persons registered under this Act, to enable the Registrar duly to fulfil the duties imposed upon him, it shall be lawful for the Registrar to write a letter to any registered person, addressed to him according to his address on the Register, to inquire whether he has ceased to carry on business or has changed his residence, and if no answer shall be returned to such letter within the period of six months from the sending of the letter, it shall be lawful to erase the name of such person from the Register, provided always that the same may be restored by direction of the Council of the Pharmaceutical Society, should they think fit to make an order to that effect.

Duty of Registrar to make and keep Register.

11. Every Registrar of Deaths in the United Kingdom, on receiving notice of the death of any Pharmaceutical Chemist, or Chemist and Druggist, shall forthwith transmit, by post, to the Registrar, under the Pharmacy Act, a certificate, under his own hand, of such death, with the particulars of the time and place of death, and may charge the cost of such certificate and transmission as an expense of his office, and on the receipt of such certificate, the said Registrar shall erase the name

Notice of death of Pharmaceutical Chemist or Chemist and Druggist to be given by Registrars.

of such deceased Pharmaceutical Chemist, or Chemist and Druggist, from the Register.

Evidence of Qualification to be given before Registration

12. No name shall be entered in the Register, unless the Registrar be satisfied by the proper evidence, that the person claiming is entitled to be registered; and any appeal from the decision of the Registrar may be decided by the Council of the Pharmaceutical Society; and any entry which shall be proved to the satisfaction of such Council to have been fraudulently or incorrectly made, may be erased from or amended in the Register, by order, in writing, of such Council.

Annual Register to be published and be evidence.

13. The Registrar shall, in every year, cause to be printed, published, and sold, a correct Register of the names of all Pharmaceutical Chemists, and a correct Register of all persons registered as Chemists and Druggists, and in such Registers, respectively, the names shall be in alphabetical order, according to the surnames, with the respective residences, in the form set forth in Schedule B to this Act, or to the like effect, of all persons appearing on the Register of Pharmaceutical Chemists, and on the Register of Chemists and Druggists, on the 31st day of December last preceding, and such printed Registers shall be called "The Registers of Pharmaceutical Chemists and Chemists and Druggists," and a printed copy of such Registers for the time being, purporting to be so printed and published as aforesaid, or any certificate under the hand of the said Registrar, and countersigned by the President or two Members of the Council of the Pharmaceutical Society, shall be evidence in all Courts and before all Justices of the Peace and others, that the persons therein specified are registered according to the provisions of the Pharmacy Act or of this Act, as the case may be, and the absence of the name of any person from such printed Register shall be evidence, until the contrary shall be made to appear, that such person is not registered according to the provisions of the Pharmacy Act or of this Act.

Penalty on wilful falsification of Register, or for obtaining registration by false representation

14. Any Registrar who shall wilfully make or cause to be made any falsification in any matter relating to the said Registers, and any person who shall wilfully procure or attempt to procure himself to be registered under the Pharmacy Act or under this Act, by making or producing or causing to be made or produced any false or fraudulent representation or declaration, either verbally or in writing, and any person aiding or assisting him therein, shall be deemed guilty of a misdemeanour in England, and in Scotland of a crime or offence punishable by fine or imprisonment, and shall on conviction thereof be sentenced to be imprisoned for any term not exceeding twelve months.

Protection of titles.

15. Any person keeping an open shop for the retailing, dispensing, or compounding poisons, or for compounding the prescriptions of duly qualified medical practitioners, or who shall take, use, or exhibit the name or title of Chemist and Druggist or Chemist or Druggist, not being a duly qualified Pharmaceutical Chemist or a Chemist and Druggist, or who shall take, use, or exhibit the name or title Pharmaceutical Chemist or Pharmaceutist or Pharmacist, not being a Pharmaceutical Chemist, shall, for every such offence, be liable to pay a penalty or sum of £5, and the same may be sued for and recovered in the manner provided by the Pharmacy Act for the recovery of penalties under that Act, and shall be dealt with as the Commissioners of Her Majesty's Treasury shall direct.

Reserving rights of certain poisons.

16. Nothing hereinbefore contained shall extend to interfere with the business of any duly qualified medical practitioner or of any member of the Royal College of Veterinary Surgeons of Great Britain, nor with the making or dealing in patent medicines, nor with the business of wholesale dealers in supplying poisons to retail dealers in the ordinary course of wholesale dealing, nor with the retailing of poisons for use in manufactures or

photography; and upon the decease of any Pharmaceutical Chemist or Chemist and Druggist actually in business at the time of his death, it shall be lawful for any executor, administrator, or trustee of the estate of such Pharmaceutical Chemist or Chemist and Druggist to continue such business if and so long only as such business shall be *bonâ fide* conducted by a duly qualified assistant resident on the premises whereon the business shall be actually carried on, and a duly qualified assistant within the meaning of this clause shall be a Pharmaceutical Chemist or a Chemist and Druggist registered by the Registrar under the Pharmacy Act or this Act.

17. It shall not be lawful to sell, give, or deliver any poison, either wholesale or by retail, or in a solid or liquid state, unless the box, bottle, vessel, wrapper, or cover in which such poison is contained be distinctly labelled with the word Poison, and with the name and address of the seller, giver, or deliverer of the poison, and any seller, giver, or deliverer of any poison not so distinctly labelled, shall, upon a summary conviction before two Justices of the Peace in England or the Sheriff in Scotland, be liable to a penalty not exceeding £5 for the first offence, and to a penalty not exceeding £10 for the second offence, and for the purposes of this clause the person on whose behalf any sale is made by any apprentice or servant shall be deemed to be the seller.

Poisons to be distinctly labelled. Penalty on omissions.

18. All persons registered under this Act shall be exempt from service on juries.

Registered persons exempt from Juries.

19. Every person who is or has been, or shall for the time being be in business on his own account as a Chemist and Druggist as aforesaid, and who shall be registered as a Chemist and Druggist shall be eligible to be elected and continue a member of the Pharmaceutical Society according to the bye-laws thereof; but no person shall, in right of membership acquired pursuant to this clause, be placed on the Register of Pharmaceutical Chemists, nor, save as is hereinafter expressly provided, be eligible for election to the Council of the Pharmaceutical Society.

Chemists and Druggists eligible for election as members of Pharmaceutical Society

20. Every person who is or has been in business on his own account as a Chemist and Druggist as aforesaid at the time of the passing of this Act, and who shall become a member of the Pharmaceutical Society, shall be eligible for election to the Council of the Pharmaceutical Society; but the said Council shall not at any time contain more than seven members who are not on the Register of Pharmaceutical Chemists, nor more than seven members who shall not at the time of election *bonâ fide* reside within twelve miles by highway or road from the General Post-office in St. Martin's-le-Grand.

Council of Pharmaceutical Society

21. At all meetings of the Pharmaceutical Society at which votes shall be given for the election of officers, all or any of the votes may be given either personally or by voting papers, in a form to be defined in the bye-laws of the said Society, or in a form to the like effect, such voting papers being transmitted under cover to the secretary, not less than one clear day prior to the day on which the election is to take place.

Voting papers for election of Council.

22. And whereas by the Charter of Incorporation of the said Pharmaceutical Society it is provided that the Council of the said Society shall have the sole control and management of the real and personal property of the said Society, subject to the bye-laws thereof, and shall make provision thereout, or out of such part thereof as they shall think proper, for the relief of the distressed members or associates of the said Society, and their widows and orphans, subject to the regulations and bye-laws of the said Society. And whereas, for extending the benefits which have resulted from the said provision in the said Charter of Incorporation, it is desirable that additional power should be granted to the said Council, be it enacted that from and after the passing of this Act, the said

Benevolent Fund may be applied to past members and associates, also to Pharmaceutical Chemists and registered Chemists and Druggists.

Council may make provision out of the real and personal property aforesaid, and out of any special fund, known as the Benevolent Fund, not only for the relief of the distressed members or associates of the said Society and their widows and orphans, subject to the said regulations and bye-laws, but also for all persons who may have been and have ceased to be members or associates of the said Society, or who may be or have been duly registered as "Pharmaceutical Chemists" or "Chemists and Druggists," and the widows and orphans of such persons, subject to the regulations and bye-laws of the said Society.

23. This Act may be cited as the Pharmacy Act, 1867.

SCHEDULE A.

Arsenic and its preparations.	Emetic Tartar.
Oxalic Acid.	Corrosive Sublimate.
Prussic Acid.	Nitrates of Mercury, and Red and White Precipitate.
Chloroform.	Belladonna and its Preparations.
Cyanides of Potassium and Mercury.	Essential Oil of Almonds, unless deprived of its Prussic Acid.
Strychnine and all poisonous vegetable alkaloids and their Salts.	Cantharides,
Aconite and its Preparations.	Savin and its Oil.
Opium, its Extract, and Laudanum.	

SCHEDULE B.

Name.	Residence.	Qualification.
A. B.	Oxford Street, London.	In business prior to Pharmacy Act, 1867.
C. D.	George Street, Edinburgh.	Examined and certified.
E. F.	Cheapside, London.	Apprentice or Assistant prior to Pharmacy Act, 1867.

SCHEDULE C.

Declaration by a person who was in Business as a Chemist and Druggist in Great Britain before the Pharmacy Act, 1867.

To the Registrar of the Pharmaceutical Society of Great Britain.

I, _____, residing at _____, in the County of _____, hereby declare that I was in business as a Chemist and Druggist, in the keeping of open shop for the compounding of the prescriptions of duly qualified medical practitioners at _____ in the County of _____, on or before the _____ day of _____, 1867.

Signed _____ (Name)
Dated this _____ day of _____ 18 _____.

SCHEDULE D.

Declaration to be signed by a duly qualified medical practitioner respecting a person who was in business as a Chemist and Druggist in Great Britain, before the Pharmacy Act, 1867.

To the Registrar of the Pharmaceutical Society of Great Britain.

I, _____, residing at _____, in the County of _____, hereby declare that I am a duly qualified medical practitioner, and that to my knowledge _____, residing at _____, in the County of _____, was in business as a Chemist and Druggist, in the keeping of open shop for the compounding of the prescriptions of duly qualified medical practitioners, before the _____ day of _____, 1867.

Signed _____

SCHEDULE E.

Declaration to be signed by and on behalf of any Apprentice or Assistant claiming to be registered under the Pharmacy Act, 1867.

To the Registrar of the Pharmaceutical Society of Great Britain.

We hereby declare that the undersigned _____, residing at _____, in the County of _____,

had, before the passing of the Pharmacy Act, 1867, been employed in dispensing and compounding prescriptions, as an Assistant to a Pharmaceutical Chemist or Chemist and Druggist, and attained the age of twenty-one years, or being apprenticed to a Pharmaceutical Chemist or Chemist and Druggist.

As witness our hands, this _____ day of _____, 1867

A. B., duly qualified Medical Practitioner.
C. D., Pharmaceutical Chemist.
E. F., Chemist and Druggist.
G. H., the Assistant or Student.

UNITED SOCIETY OF CHEMISTS AND DRUGGISTS.

MEETING OF EXECUTIVE COMMITTEE,

March 20th, 1867.

THE President, Mr. Matthews, in the chair.

The Secretary read the following correspondence, relating to the present state of trade legislation, from the following local secretaries, etc.:—

Edmund Holt, Manchester; C. Packwood, Birmingham; R. O. Huddleston, Sheffield; J. T. Dobb, Sheffield; F. Hudson, Sheffield; R. H. Bockett, hon. secretary, U. S., Newcastle; W. B. Harrison, Sunderland; W. Stanning, Hull; W. Bell, chairman, Hull; J. F. Smith, honorary secretary, Liverpool; G. F. Mercer, Longton; W. Mitchell, Bristol; and W. C. Hayland, York.

A communication was also read from Bolton, drawing the Committee's attention to the operation of the Bolton Improvement Act in the sale of poisons.

The draft copy of the Pharmacy Act was then laid on the table, and, after a lengthened discussion, various suggestions and amendments were made; and a parliamentary committee was appointed to confer with a similar committee of the Pharmaceutical Society on the following day, when the suggestions previously referred to were again discussed, and agreed upon, it being understood that as soon as they were embodied in a parliamentary form, copies of the bill should be printed.

MEETING March 26th.

Mr. Matthews in the chair.

A communication, forwarded by Mr. Brown, secretary, York Chemists' Association, was read, and other business transacted.

York, March 20th, 1867.

At a general meeting of the trade held to consider the provisions of a Bill to amend the Pharmacy Act, and to regulate the sales of poisons, present—Messrs. Dennis, Brown, Bulmer, Dresser, Bowman, Wilson, Hartley, Jacob Wood, James Wood, and Cooper, the former in the chair, the following resolutions were unanimously agreed to:—

Moved by Mr. Dresser, M.P.S., and seconded by Mr. Bowman, M.P.S.:—

That in the opinion of this meeting all exempting clauses relating to assistants should be altered to include apprentices, and that all assistants and apprentices should be required to register themselves within six months after the passing of the Act, or in default thereof, to undergo an examination.

Moved by Mr. Dresser, and seconded by Mr. Wilson, M.P.S.:—

That schedule D be recommended to be withdrawn, and, in lieu thereof, a certificate be required from a pharmaceutical chemist or chemist and druggist, in addition to the declaration required from a person claiming to be registered as a chemist and druggist on the ground that he was in business previous to the passing of the Act.

Moved by Mr. Hartley, and seconded by Mr. Jacob Wood:—

That the promoters of the Bill be most strongly recommended to insert a clause to the following or like effect: viz., That on the death of a pharmaceutical chemist or chemist and druggist, his widow or trustees may carry on the said business under the management of a duly qualified assistant, registered under this Act.

Moved by Mr. Thomas Cooper, M.P.S., and seconded by Mr. James Wood:—

That the draft Bill generally be approved, and that the secretary communicate the resolutions, and strongly recommend them for adoption, to the Council of the Pharmaceutical Society, and the Executive Committee of Chemists and Druggists.

Signed, on behalf of the Meeting,

By GEORGE DENNIS, *Chairman*.

At this stage of the proceedings it is a matter of satisfaction for the Committee to know that the important step has been gained of a Bill being agreed upon, based on such principles as will secure the support of all parties.

By the 5th clause of the new Bill it is arranged that the appointment of Registrarship shall be held by the Secretary of the Pharmaceutical Society. This will of course leave Mr. Buott totally unprovided for.

That after all the important, and almost unpaid services of this gentleman on behalf of the trade, he should be thus apparently deserted, this Committee cannot but regard as a most unfortunate circumstance, and one, if possible, it is desirable to remedy.

Suggestions have been made to the effect that a voluntary fund be raised, and presented to that gentleman as a testimonial, which, if acted upon, this Committee will give their best support to.

By order of the Publishing Committee,

HORATIO PASS, *Chairman*.

MEETING AT LIVERPOOL.

At an important meeting of the members of the Association of the United Society, held at the Stork Hotel, Queen's-square, on the 3rd of April (John Edisbury, Esq., in the chair), the following resolutions were adopted.

Moved by Mr. Hocken and seconded by Mr. Heaton:—

That this meeting confirms the qualified sanction given by the Chairman and Secretary of the Liverpool Association of the United Society of Chemists and Druggists to the proposed amendments to the Pharmacy Bill, but reserves its judgment to its details, and to any addition or alteration which may be thought calculated to improve it.

Moved by Mr. Heaton and seconded by Mr. Joseph:—

That this meeting rejoices to find that the vested interests of assistants and apprentices are now recognised and provided for, and it would recommend the interests of the widows of deceased chemists to the serious consideration of the Executive Committee.

Moved by the Secretary (Mr. J. T. Smith) and seconded by Mr. Taylor:—

That in reference to the 5th clause of the Bill, and to the resolution of the Annual Meeting of 1865 in regard to the Registrar, this meeting considers it to be the duty of the Annual Meeting of 1867 to decide in what way the pledge then given to the Registrar shall be redeemed. That a suggestion be made to the Pharmaceutical Council that the offices of Registrar and Registrar and Secretary be divided, and that Mr. Buott be appointed to the one or the other office; but in the event of their refusal to entertain the suggestion, that the several associations of the United Society be respectfully requested to take steps for the purpose of presenting Mr. Buott with a suitable testimonial for his past services in connection with the Society.

Moved by Mr. Joseph and seconded by Mr. Saunders:—

That to secure the success of the Bill in Parliament, it is necessary to maintain the efficiency of the Society in Liverpool, and the following gentlemen—viz., Messrs. Taylor, Heaton, Hocken, Graham, Templeton, Joseph, Fleming, and Saunders, be appointed a committee to aid the Chairman and Secretary in securing the support of members of Parliament, and in otherwise co-operating with the executive.

Moved by Mr. Joseph and seconded by Mr. Templeton:—

That the Liverpool subscriptions for 1867 be collected without delay, and that an additional subscription of 1s. per member be made to cover the cost of collection and local expenses.

THE NEW BRITISH PHARMACOPŒIA.

THE following description of the forthcoming work, extracted from the columns of the *Lancet*, will be perused with pleasure by our readers. When the Pharmacopœia appears, we shall review it at length.

The first great feature of the work that strikes the eye is the arrangement of the matter, which is entirely different from that of any Pharmacopœia previously published in this country. We have no longer the classification of medicines under the heads of "Materia Medica," and "Preparations and Compounds." All are now included in one category, and arranged under their Latin names in alphabetical order, after the manner of a Dictionary. The object in adopting this arrangement appears to have been to facilitate reference, and to obviate an inconvenience that was much complained of in the previous edition of the Pharmacopœia, arising from a portion of the information relating to certain medicines being contained in a different part of the work from that in which the processes for their production were described. Thus, for instance, the processes for the preparation of *Liquor ammoniæ acetatis*, *Spiritus ætheris nitrosi*, *Acidum hydrocyanicum dilutum*, etc., were, in the previous edition, contained in the part of the work devoted to "Preparations and Compounds;" while the descriptions of the products, their characters, tests, etc., were contained in another part of the book, under the head of "Materia Medica." In the arrangement which is now adopted all the information relating to any one of these, or indeed to any preparation, is contained in one place; and this is easily found, as all the names, in Latin, are arranged alphabetically. But even should the Latin name be forgotten, there is a most copious index, in which English as well as Latin names and synonyms are included; so that every facility is afforded for reference to any part of the information contained in the book.

Another feature by which this edition is distinguished from the previous one consists in the substitution of figures for words in expressing the quantities of the ingredients directed to be used in the different processes for the preparation of medicines. This, which might be thought a trivial matter, is really one of some importance in a practical point of view. Those only who are accustomed to the dispensing of medicines can fully appreciate the advantage of having a process presented to the eye in a form in which it can be taken in as a whole, and the substitution of figures for words in expressing quantities greatly facilitates this object. There is, it is true, an objection sometimes urged against this method of describing processes—which is, that figures are very liable to get misplaced, and that errors may thus creep in without being noticed. If these errors be carefully guarded against, there can be no doubt of the greater distinctness of a process in which figures are used than one in which quantities are expressed in words.

Appended to the description of each substance in the Pharmacopœia is a list of all the preparations in which it is used. This, assuming the lists to be complete and accurate, is a very useful part of the information given; for not only is every preparation named that contains the substance under which the list is given, but the proportion is also specified in which such substance is contained in the preparation. Thus, for instance, under the head of *Cardamomum* we have a list of all the preparations of cardamom, seven in number, and the proportion of cardamom seeds in each. So, in like manner, under the several heads of *Ferrum*, *Hydragryum*, *Ipecacuanha*, *Opium*, etc., we find lists of all the preparations containing those medicines, and the proportions in which they are present, when this can be stated, in such as contain them in any other state than that of chemical combination.

We observe throughout the book that the names of many substances have been changed; but most of these changes relate to the names of drugs, and especially of the parts of plants, which have hitherto been designated, in Latin, by short names that have not been very explicit. Thus, for instance, "*Acacia*" is changed to "*Acaciæ Gummi*," "*Aconitum*" to "*Aconiti Folia*," "*Anthemis*" to "*Anthemidis Flores*," "*Carui*" to "*Carui Fructus*," "*Quercus*" to "*Quercus Cortex*," etc. There are, however, some changes of name of a different description from this. Those scientific names

of calomel and corrosive sublimate are of course altered; they are now "Hydrargyri Subchloridum" and "Hydrargyri Perchloridum;" and the names used in the London Pharmacopœia for the preparations containing calomel and opium are restored. We see, from a list given at the commencement of the book, that there are upwards of ninety names altered. The preface states: "In the use of names to designate medicines, the Council have endeavoured to adopt such as, with a due regard to conciseness, are most explicit and most likely to be understood; while, at the same time, they do not unnecessarily involve scientific theories that are liable to change, and are not likely, when employed in prescriptions, to excite the prejudices or the fears of those for whom the medicines may be ordered. Some names have been altered in accordance with these principles, but changes of name have in no case been introduced unless there appeared to be strong grounds for them."

One of the new features in the work consists in the introduction of doses, which are appended to all the more important medicines. It has been frequently and very strongly represented by many members of the profession, that since the Pharmacopœia, in its authoritative form, has been published in English, with an amount of practical and scientific information that is calculated to supersede the necessity of referring to annotated copies, some information with reference to the doses of medicines ought to be included in the work. This is now done for the first time, "the quantities stated under this head being intended to represent average doses, in ordinary cases, for adults." The Committee add, that these doses "are not authoritatively enjoined by the Council, and the practitioner must rely on his own judgment, and act on his own responsibility, in graduating the doses of any therapeutic agents which he may wish to administer to his patients."

Having thus noticed what appear to be the principal peculiarities in the new work, we may now state what will, perhaps, be considered of more importance than anything we have yet alluded to—namely, that a considerable number of medicines which, although long recognised in our Pharmacopœias and frequently employed in medical practice, were omitted from the British Pharmacopœia, are now restored; and that, in addition to these, there are many valuable medicines now for the first time introduced into the Pharmacopœia. We observe a list of "substances included in the present edition of the British Pharmacopœia, but not in the Pharmacopœia of 1864," which comprises no less than ninety-nine articles. Among these are many familiar preparations: such as acetum cantharidis, acetum scillæ, confectio opii, extractum lactucæ, infusum aurantii compositum, infusum gentianæ compositum, *Lond.*, oxymel scillæ, spiritus ammoniæ fetidus, etc.

THE SULPHUR MINES OF MEXICO.

Mexico, besides being the theatre of political change, is also subject to many natural convulsions; but the latter phenomena are certainly attended by more satisfactory results than the former, for the changes worked by nature, even when attended by violence, are productive, after their kind. One of the most curious results in this fiery region is the formation of sulphur, of which the British consul in that country has recently forwarded a detailed account to the Foreign Office. Mr. Middleton divides the sulphur-producing districts of Mexico into five—viz., San Antonio, Taximona, Mapimi, Popocatepetl, and Las Virgenes; but there are several other districts where large beds of sulphur are found, and veins in the fissures of the rocks fill up the crevices and holes, where, after a natural process of decomposition, the sulphur produces alum. The consumption of sulphur from this region seems to be enormous, but no definite figures can be obtained as to the quantity exported. At San Antonio the formation is in "cumulos," or extensive beds which spread out in various directions. The deposits at present worked run north and south, and are situated in the bed of a mountain stream, having been worked since the last century; between the layers, masses of chalcodony and sulphate of lime (gypsum) are to be found. The sulphate of lime which borders the sulphur, is found in a

crystallized state, and between this and the sulphur water is found, which acquires an acid taste after a short exposure to the air; probably on account of the sulphuric acid contained in the crystallized sulphur.

The sulphur bed is about eight yards below the surface of the soil, and the workings have been carried to a depth of twenty yards through the sulphur, without the thickness of the bed having, as yet been ascertained; the bed itself being about seven yards in width.

In the district of Mapimi the natural sulphur is sold at from 1 to 1½ dollars per carga, which is a load of 300 lbs., and it was from this deposit that the Spaniards, who discovered it, used to get their supply for the manufacture of their gunpowder.

The crater of the gigantic snow-covered volcano of Popocatepetl, which, with a neighbour having a similar name, forms one of the prominent objects in the landscape through the whole valley of Mexico, appears to be a vast sulphur manufactory; everywhere, on the soil being turned up, "azufre flor," or pure sulphur, is found in a condensed state, and it can be procured by condensing the sulphureous vapours in earthen vessels. In 1857, a captain of Engineers, named Perez Castro, with three students, made the first exploration within the crater for scientific purposes, from whose reports the British consul obtained the following description of this strange region:—

"Distinct columns of vapour issue from each 'respiradero,' as seen from the summit of the volcano, and which produce a roaring sound, accompanied now and then by that of slight explosions.

"The crater is of an elliptical but very irregular shape, being 240 miriametres in width at its greatest axis, and 170 at its lesser; its depth being 143·85 miriametres below the ledge of rock upon which a 'malacate' or 'crane' is erected, and which is at a considerable depth below the 'lip' of the crater itself.

"The interior walls, as well as the bottom of the crater, are composed of rocks and boulders of fantastical shapes; and it is calculated that the earth and loose stones which are constantly rolling into it fill it up to the height of about a yard annually.

"A popular tradition exists also that in the year 1588 an irruption took place which caused the crater to assume its present shape, its depth having been much less before, and the descent into it comparatively easy; and thus the tradition in question has given rise to the supposition that when the crater shall have been again filled up to a certain height, another eruption will take place.

"The labour of extraction is performed by workmen at the bottom of the crater, who work about ten at a time at digging out the sulphur, which they have to carry up a slope 100 miriametres in extent, and of an inclination of 45 degrees, and composed of loose earth and stones, until they reach a spot called the 'desenganchadero' or unhooking place; and for every arroba (25 lbs.) which they deposit there, they receive 13½ cents (about 6d.); and those well accustomed to the work make five trips per diem, carrying 4 arrobas (100 lbs.) at a time.

"From the 'desenganchadero' the sulphur is raised by a windlass, up to the ledge of rock upon which the crane is erected, the windlass being worked by four men who earn 62½ cents (about 2s. 6d.) per diem, and is then carried by other labourers up to the edge itself of the crater, and from thence is taken down to the 'cruz' or 'cross,' a distance of about 500 miriametres, on an inclined plane of snow, each man being seated on a kind of sledge composed of an ox-hide, with two cargas or loads of sulphur of 5 arrobas (125 lbs.) each before him, and guiding the sledge by means of a pole; these descents, which are attended with considerable danger, being termed 'corridas' or races.

"From the 'cruz' to the 'rancho,' or large hut, of Panamacas, situated at the edge of the snow, and just on the limit to which vegetation extends, being about 13,000 feet above the level of the sea, a distance, from one point to the other, of about three leagues, the sulphur is carried down by men on their backs, at the rate of 62½ cents (about 2s. 6d.) per day; the condensing process, or extraction of the 'azufre flor,' or 'pure sulphur,' being effected in earthen pots, at the 'rancho,' by the application of heat.

In order to facilitate the transaction of the sulphur from

the volcano, as well as to obviate the necessity of the labourers being exposed to the difficulties and dangers incurred in the mode at present pursued, it has been suggested to construct an adit to communicate with the crater at its base; but such an undertaking would appear to present almost insurmountable difficulties. The work of extraction commences at the end of the month of January, and has to be suspended upon the commencement of the rainy season in May; and the amount of unrefined sulphur obtained during the four months is, upon an average, 1,750 quintals, about 175,000 lbs., which, after condensation at the 'rancho' of Ilimacas, produces about 1,000 quintals (about 100,000 lbs.) of 'azufre flor,' or 'pure sulphur;' the difficulties of extraction, transport, &c., having caused the operations pursued to be limited to the richer deposits in the crater alone; whilst those rather less abundant have been turned to no account whatever.

"The sulphur obtained from Popocatepetl fetches, in the city of Mexico, from 11 to 12 dollars per quintal (100 lbs.); whilst in that of Puebla (the former city being distant fourteen, and the latter eight, leagues from the 'rancho' of Ilimacas) it fetches from 10 to 11 dollars per quintal."



HORSLEY'S TOXICOLOGIST'S GUIDE.

The Toxicologist's Guide; a new Manual on Poisons. By JOHN HORSLEY, F.C.S., Analytical Chemist, Cheltenham. London: Longmans. 1866. Pp. x—73.

Mr. Horsley is a bold man. He has essayed to give us the method of detecting almost every poison that flesh is victim to in about seventy pages; he has endeavoured to accomplish his lengthy task in about one-twentieth part of the space taken by Orfila, Christison, or Taylor, in their toxicological manuals. The consequence of this attempt at compression has been that Mr. Horsley has produced a most meagre little book, wanting in the description of all those little details of chemical and microscopical manipulation that it is necessary to employ when a man's life or liberty depends on the result. As an introduction to the study of *experimental toxicology*, Mr. Horsley's little book will serve as a pretty efficient and trustworthy guide; but, we fear, if a country analyst pinned his faith upon it, a sharp counsel, who had been well coached by a good chemist, would make sad work of his toxicological report. Most of the tests given are those sanctioned by general usage; Mr. Horsley, in many cases, adding confirmatory reactions discovered by himself. The woodcuts are badly executed, especially those depicting the appearance of certain crystals under the microscope. Before publishing another edition of his book, Mr. Horsley would do well to examine the very beautiful drawings of crystals under the microscope, from the pencil of Mr. Brady, that have appeared from time to time in the Transactions of the British Pharmaceutical Association. It might be objected that the addition of expensive plates would materially add to the price of the work; but it must be remembered that toxicology, more especially as a branch of criminal procedure, is not for those who cannot afford to buy the best and consequently dearest works on the subject.

Mr. Horsley shows great carelessness and lack of precision both in his descriptions and nomenclature—two faults that should surely not belong to the toxicologist.

For the student with a fancy for toxicology, this little manual will form an excellent introduction to the study of that branch of chemical science; but for the professional man it will only serve as a remembrancer of knowledge already acquired.

It is a pity that Mr. Horsley had not adopted the most modern system of nomenclature; we should then have been spared the task of noticing such careless oversights as calling sulphides alternately sulphides and sulphurets; nitro-benzol, nitrate of benzol; sulphide of hydrogen, sulphuretted hydrogen and sulphide of hydrogen; and many other similar inconsistencies. To those into whose hands this book is likely to fall such eccentricities would be hopelessly confusing.

COOLEY'S TOILET AND COSMETIC ARTS.

The Toilet and Cosmetic Arts in Ancient and Modern Times: with a review of the different theories of Beauty, and copious allied information—social, hygienic, and medical; including instructions and cautions respecting the selection and use of perfumes, cosmetics, and other toilet articles; and a comprehensive collection of formulae, and directions for their preparation. By ARNOLD J. COOLEY. London: Robert Hardwicke. Pp. 804.

The first half of this somewhat bulky book is taken up with historical notices on the toilet arts of the ancients and moderns of all countries, followed by an essay on Beauty, Dress, Jewellery, Cleanliness, The Skin, The Hair, and outside of the human frame generally. It hardly comes within our province to criticise this portion of Mr. Cooley's work; but a hasty glance at it seemed to indicate that, although it contains much that is interesting, there is also a great deal of irrelevant matter added. There are some statements, too, that we feel inclined to question. For instance, we can hardly believe that there is strong reason for supposing that the ancient Egyptian hierarchy were acquainted with the daguerreotype, photography, the electric telegraph, and "a means of rapid transit resembling railway," (p. 23). We fear that Mr. Bonomi, Mr. Birch, Mr. Cox, or some other learned Egyptologist, has been "selling" Mr. Cooley. We also doubt whether any modern "swell" has ever been found sufficiently idiotic to distend his peg-top trousers with steel, cane, buckram, or whale-bone, (p. 80).

The second half of the book is devoted to the art of preparing every possible description of cosmetic. The word "cosmetic," Mr. Cooley tells us, is derived from a Greek verb, signifying to embellish or adorn. The word may therefore be applied to any external application for the promotion, preservation, or restoration of personal beauty. The author divides cosmetics into three great classes—those used respectively for the skin, hair, and teeth. He first gives a number of recipes for the preparation of such substitutes for soap as "amandine," "camphor balls," and "milk of almonds;" emollients, like "cold cream" and "lip salve;" various preparations of carmine and rouge, pearl powder, court plaster, violet powder, shaving paste, medicated soaps, and so on. From the contents of the first part of the book, we were inclined to think that it was intended more for the drawing-room than for the laboratory. If this be so, is not *Savon antisiphilitique* (p. 443) somewhat out of place? The second division includes all hair cosmetics, such as oils, pomades, washes, fixateurs, paints, powders, dyes, and depilatories. Amongst the dyes there does not seem to be any recipe of any particular importance or novelty. The description of the various dyes for turning the hair red or yellow is sufficient to horrify anybody who reads it carefully. Orpiment dissolved in ammonia, nitrate of lead, and chromate of potash, bichloride of tin, or a salt of antimony, and sulphide of ammonium are amongst the substances said by Mr. Cooley to be used by ladies anxious to obtain golden locks. Amongst the remedies for baldness, the author vaunts croton oil as the latest specific. He says it was first used by an eminent French physician, who advises it to be well rubbed upon the scalp twice a day, and the part to be kept covered with a waterproof cap. Mr. Cooley states, however, that the cap is not only unnecessary, but injurious. From experiments he has tried, he seems disposed to think that croton oil is more efficacious than cantharides. Here is his recipe, if any of our readers like to try it:

Croton oil, 12 drops,
Oil of almonds, 4 drachms (Troy).

This strength is apt to cause a pustular eruption if used too copiously. Possibly a mixture of half the strength named would be preferable when the skin is tender. Under the heading of tooth cosmetics, we have a whole array of recipes, containing all kinds of ingredients. Some of them seem good enough; but others—the galvanic dentifrice, for example, containing gold and silver leaf—are silly, and simply encumber the book. However, Mr. Cooley states in his preface that he is not responsible for the plethora of the last part of his book. As a supplement to dentifrices we have a number of recipes for tooth combs and breath cosmetics.

Perfumes are, of course, very fully treated; but many of the recipes contain ingredients that a London pharmacist would be puzzled to obtain. There are, of course, several recipes given for the far-famed Eau de Cologne; one of them is somewhat absurd, containing as it does nineteen ingredients in the first distillate, to which are added eight more. Pomatums, also, come in for a large amount of attention; but there seems to be nothing very new amongst them. The book concludes with a miscellaneous series of formulæ for chilblain liniments, chap lotions and ointments, corn solvents and plasters, eye waters, itch and pediculus lotions and ointments, toothache remedies, and, lastly, aperient pills and draughts. In the appendix there are some useful tables of weights and measures, and the index is particularly copious and complete.

BOOKS AND PERIODICALS RECEIVED.

"Monthly Homœopathic Review," Henry Turner and Co., Fleet-street; "Watts' Dictionary of Chemistry" (Part 38), Longmans and Co.; "The Chemical Manufacturers' Directory of England," W. Hoe, Bread-street-hill; "Montreal Trade Review" (Feb. 15), "Scientific American" (Feb.), Mann and Co., New York; "The Veterinary Gazette" (Feb.); "Boston Medical and Surgical Journal" (Nov., Part 436); "Matter: Its Ministry to Life in Health and Disease; and Earth as the Natural Link between Organic and Inorganic Matter," by T. Hawksley, M.D., London: T. Churchill and Sons; "The Wholesale and Export Drug Circular;" "The Pharmaceutical Journal;" "The Eclectic Medical Journal" (December), Cincinnati, I. M. Scudder, M.D.; "The Dental Cosmos," I. H. McQuillen, D.D.S., George J. Zeigler, M.D., S. S. White, Philadelphia, (Jan. 1867); "Atlanta Medical and Surgical Journal," I. G. Westmorland, M.D., and W. F. Westmorland, M.D., Atlanta, Ga.; "Bloxam's Chemistry," Churchill.

GAZETTE.

BANKRUPTS.

GRANVILLE, JOSEPH MORTIMER, Wandsworth, surgeon. [chester. GREAVES, GEORGE, Blackburn, manufacturing chemist, April 1, Man-PACE, WILLIAM, St. Blazey, Cornwall, surgeon, April 5, St. Austell. WATTS, ALFRED BULLOCK BAOHOTT, Hurstpierpoint, registered medical practitioner, March 27, at 11 WESTMACOTT, J. V. LASCELLES, Manchester, surgeon, April 2, Manchester.

PARTNERSHIPS DISSOLVED.

CLARKSON and NEAL, Birmingham, surgeons. GREEN and WILLS, Old Kent-road, surgeons. JOHNSON, E., W., and H., Great Malvern, physicians. ROBINSON and LIOERTWOOD, Newbury, surgeons. SAWYER and HILL, Brighton, soda-water manufacturers. SMYTH and BATEMAN, Bingham, East Bridgford, and elsewhere, surgeons. WADE and SKELTON, York, dentists.

SCOTCH SEQUESTRATION.

PENNEY, C., Glasgow, manufacturing chemist, March 29, at 12, Faculty-hall, Glasgow.

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LONDON GAS.—Dr. Frankland's course of lectures on coal-gas, which will be fully reported in these columns, has unsettled the popular belief respecting the conditions of luminosity of a gas flame. They have also had the effect of disturbing the peace of the London gas companies. He has told them the gas they supply is utterly unfit for use in dwelling-houses, and far inferior to that with which an inhabitant of Edinburgh or Glasgow illuminates his drawing-room. He reminded consumers that low-priced gas is not necessarily cheap gas, and hopefully pointed to "a good time coming," when they would burn a gas of not less illuminating power than twenty candles per five cubic feet per hour, below which quality the lecturer asserted no gas was fit for domestic use. —From the Laboratory.



LONDON, APRIL 15, 1867.

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Everything intended for insertion in the current Month must be sent in before the 10th, except Employers' and Assistants' Advertisements, which will be received until 9 A.M. on the morning previous to publication.

THE GOVERNMENT DEPARTMENTS AND CHEMISTRY.

In the report of the Revenue Board, recently presented to the Government, there are several items which will not be without interest to our readers. Until within the last few years most of the scientific judgment of the tax-collecting departments was vested in the gauger; but the present system of duties, and the refined process by which articles liable to be taxed are manipulated, with a view to reduce the amount payable, for an organized chemical department, which has been in existence for twenty-four years, and is now under the direction of Mr. Phillipps. The reports of this gentleman are perhaps the most generally interesting documents which are annually submitted by the Government to the Houses of Parliament. According to the present report of the Principal, the Inland Revenue Laboratory has now been in existence about twenty-four years, and during that period its labours have been directed mainly to the prevention of the adulteration of dutiable commodities, and partly to the scientific and practical investigation of subjects which concern the revenue. Since its establishment upwards of 110,000 analyses have been made, whilst during the last ten years nearly 90,000 samples have been analysed. Within the year ended on the 31st of March, 1866, thirty-six cases relating to the adulteration of dutiable commodities were heard in various courts of justice in the three kingdoms, and the penalties imposed amounted to upwards of £1,800. The successful issue of these cases depended upon the evidence afforded by assistants in that department; and though many of them were strongly defended, it is a satisfaction to know that in every instance a decision was given in favour of the Crown; and this result is chiefly due to the ability of the gentlemen who analysed the samples, and gave evidence as to the nature and extent of the various adulterations.

The work which is performed in the Laboratory for the Board of Customs continues to be extensive in amount and important in character, as will be seen from the fact, that within the past year 2,172 analyses relating to Customs' duties were made, many of which required much time and ex-

perience on the part of the analyst. Altogether the number of samples examined in the year amounted to 10,697. Mr. Phillipps states that within the past year six young officers have received in his department a systematic course of instruction in chemistry, and at the termination of the course they passed with much credit through a somewhat severe examination to which they were subjected by Dr. Hoffmann.

Sixty-five officers have now been educated as chemists in the Laboratory, whilst at the present time seven are being similarly instructed. In addition to chemistry, many of these officers have acquired a sound knowledge of vegetable structure as disclosed by the microscope, and have become very efficient in the detection of adulteration.

The practice of instructing the examiners, or probationary supervisors, in the best methods of readily ascertaining whether dutiable articles of consumption are genuine or otherwise, and thus giving them confidence when dealing with fraud, is still continued; and twenty-six of these superior officers have, within the past year, been so instructed, making a total of 196 who have been under tuition in that department.

Methylated spirit seems to have given much trouble to the chemical department, and Mr. Phillipps makes the following observations upon its use and abuse:—

The use of duty-free methylated spirit in the arts and manufactures of this country has now become very extensive, and the purposes to which such spirit is applied are very various; and perhaps no legislative Act relating to revenue matters was ever more successful in its operation than the Act 18 & 19 Viet. c. 38. The benefits it has conferred on many of the trades and professions of the country, and the effective manner in which it has led to a great mitigation of the demoralizing practice of illicit distillation, have now become too obvious to require any further comment; but it is not quite unattended by evil, as some unscrupulous persons, who profess to be respectable, have long been seeking to obtain an illegal profit under cover of the provisions of the Act, regardless as to what injury this wrong inflicts either on the revenue or the public health.

Before the Act 18 & 19 Viet. c. 38, which allows the use of duty-free spirit, was passed, there was, notwithstanding the many detections made by the revenue officers, much illicit spirit produced in some parts of the north of England, particularly in Lancashire, on the moors, and in the secluded and unfrequented dells remote from towns and villages; and there is reason to believe that a large proportion of the illicit spirit went into consumption through the hands of a low class of druggists and small shopkeepers, and that, besides being used for tinctures, and sold extensively to hatters and varnish makers, it was also sold as a beverage, but disguised a little, so that it might ostensibly pass as a medicine. When the Act in question was passed, a severe check was given to these fraudulent practices. The manufacturers found that methylated was much cheaper than illicit spirit, whilst they incurred no risk by using it; and the same advantages being also apparent to those druggists who had been in the habit of dealing in the illicit material, the practice of using methylated spirit for purposes not sanctioned by the revenue was soon commenced, in the first instance, I believe, by a druggist in a large manufacturing town of Lancashire, and after the lapse of some time, by others, not only in that county, but in other parts of the north of England.

The fraud had up to within the last two or three years been difficult to deal with, partly owing to the careful skill of the offenders in disguising the methylated spirit, and selling it as a medicine, although it was used as a beverage, and partly to the want of reliable chemical tests. This want, however, is now to a great extent supplied, as, through the exertions of certain members of the Pharmaceutical Society and other chemists, and in some degree owing to investigations made in my department, we are now in possession of means by which the surreptitious beverages under consideration can be proved to contain prohibited materials.

Methylated spirit was, I believe, first sold as a beverage, under the name of "Indian brandee," a title which alone almost proves the real object of its sale. Next was introduced "medicated whiskey," "pure Islay mountain," and others, the names of which were more suggestive of the gin

palace than of the druggist's shop. Their unequalled valuable properties were widely made known through a profuse circulation of handbills and by other means. Persons went about the country pressing small shopkeepers to become retailers of the spurious article, and I have no doubt that throughout the whole of these transactions there was a tacit understanding among all concerned that the liquids should be asked for and sold as a medicine, although meant to be consumed as an ordinary stimulant.

The spurious compounds, under whatever name they were sold, had no definite composition, the only substance which was constantly present, and which, in combination with water, formed nearly the whole bulk, being methylated spirit, or a derivation from such spirit.

The "Indian brandee" was put forward as a specific for nearly every disease, and was said to be composed of the most costly and rare productions of India, which had, by great skill, been so combined and applied as to become a perfect boon to the human race. It is sad to reflect upon the unblushing audacity of such statements, made by persons who deem themselves honest, and who would resent the application to them of the word impostor; but it is far more so to think that there are large masses of the labouring classes in this country who firmly believe them.

As a corollary to the above, it may not be amiss to state that each of the samples sold as "Indian brandee," analysed during the past year, was composed of either one or other of the following groups of substances:—

First, methylated spirit, partially purified by treatment with nitric acid and distillation, containing a trace of sweet spirit of nitre, and sweetened with brown sugar.

Second, methylated spirit, slightly flavoured with rhubarb, and sweetened with brown sugar.

Third, methylated spirit, simply sweetened and coloured.

Fourth, methylated spirit, containing a small quantity of chloroform, and coloured.

Fifth, methylated spirit, with a small quantity of opium.

Sixth, methylated spirit, coloured, sweetened, and slightly flavoured with ginger.

Seventh, methylated spirit, flavoured with fenugreek, and coloured.

Several samples of "whiskey" were analysed, and, with the exception of not being coloured, found to be identical with the first group of ingredients given above.

Two samples of "Indian tincture" were also examined; one was composed of methylated spirit, containing a trace of sweet spirit of nitre, and much sweetened with treacle, the other was nothing more than methylated spirit similarly sweetened.

Within the past year, 214 samples of wood spirit were examined, with a view to determine whether or not the bulks they represented could, with safety to the revenue, be used in the methylating of spirits.

During the year the department was called on to analyse beer, cane sugar, glucose, treacle, and other saccharine matters; substitutes for coffee; ginger, orange, and quinine wines; "sanitary" beer, "tonic" ale; distillers' wash, methylated spirit, sulphuric ether, "gingerine," cordials, chocolate, and yeast.

In an appendix to the report there is the following table of licenses, which shows a considerable increase last year in the number of medicine vendors:—

ENGLAND.

Year ended 31st March.	No. granted.	Amount.	Rates of Duty.
	From Stamps.	£ s. d.	
1865	10,168	5,760 0 0	In London, £2. In other cities or boroughs, 10s.
1866	10,757	6,005 0 0	Elsewhere, 5s.

SCOTLAND.

Year ended 31st March.	No. granted.	Amount.	Rates of Duty.
	From Stamps.	£ s. d.	
1865	734	365 0 0	In Edinburgh, £2. In other cities or boroughs, 10s.
1866	761	331 10 0	Elsewhere, 5s.

THE CODEX.

IV.

MATERIA MEDICA—MATIÈRE MÉDICALE.

BY H. B. BRADY, F.L.S.

WE cannot better introduce the subject than by quoting the graceful compliment paid to the veteran Professor, Jean Baptiste Guibourt:—

La Commission a mis le plus grand soin à réunir sous une forme très-succincte les éléments les plus certains touchant l'origine et les qualités appréciables des substances médicamenteuses qui constituent la Matière Médicale. La science et l'expérience de celui de ses membres qui s'est plus spécialement occupé de cette partie de l'ouvrage donnent une autorité particulière à cet ensemble d'informations complet et précis à la fois.

The Commission has taken the greatest care to collect in a very succinct form the best ascertained elementary facts respecting the origin and appreciable qualities of medicinal substances which constitute the Materia Medica. The scientific knowledge and experience of one of its members, who has specially undertaken this portion of the work, give an exceptional authority to this compendium of information, at once precise and exhaustive.

"The specific physical properties of substances of mineral origin have been stated, as also the means of recognizing their purity, and the precautions requisite for their preservation.

"As regards substances of vegetable or animal origin, it would have been difficult to sum up in a few words descriptions which do not depend, like the preceding, on definite characteristics; hence has it been necessary to select such points as appeared the more useful and indispensable, without endeavouring to accord to each article the length assigned to some, as for example, Opium and Cinchona."

The substances which constitute the Materia Medica are arranged in alphabetical order, and the preface gives at some length the reasons which led to the adoption of a "methodical" rather than of an alphabetical arrangement of the Pharmacopœia proper.

The pharmacist accustomed only to English practice and modes of thought, can scarcely open any chapter of the portion of the Codex devoted to Materia Medica without a shock to his insular prejudices; the dimensions of the list, its arrangement, and, above all, the nature of many of the articles admitted are so different from what is found in our own pharmacopœias. There are in all something more than 620 substances recognised as officinal, and the list is further lengthened by a considerable proportion appearing under two or three different names. Thus *Carragheen* is found also as *Mousse perlée*; *Kousso* also as *Couso*; *Ichtyocolle* as *Colle de poisson*. *Uva Ursi* is repeated under three different names—*Uva Ursi*, *Raisin-d'ours*, and *Busserole*. The prussiates of potash in the same way both make their appearance in three places, the one as *Cyanure ferrico-potassique*, *Ferricyanure de potassium*, and *Prussiate rouge de potasse*; the other as *Cyanure ferroso-potassique*, *Ferrocyanure de potassium*, and *Prussiate jaune de potasse*.

In the London Pharmacopœia of 1851, the Materia Medica extended to but 274 items; and the British Pharmacopœia of 1864, which was an epitome of the three previously existing in the United Kingdom, numbered only 312 substances, though the list had been supplemented by a considerable number of articles found in commerce in condition pure enough for medical use, for the preparation of which there was no longer any necessity to lay down formulæ. From this disparity in numbers, it is obvious that the Materia Medica section of the Codex is compiled on a very different principle from that which has been followed in our own.

But although upwards of 600 crude drugs are recognised, the comparative inutility of a large proportion is tacitly admitted by a note at the commencement:—"Articles marked with an asterisk (*) should be found in every pharmacy." Somewhat more than one-third of the whole catalogue (219) are so distinguished. There is little to remark touching the selection, though it shows pretty strongly the different fashions existing in different countries with respect to medicines. Thus whilst Melilot, Balm, Bog-bean, Corsican Moss, Coltsfoot, Tea, Agaric, Asparagus, Olibanum, African Bdellium, Chicory, and Flanders Glue are regarded as remedies important enough to have the asterisk affixed, the following, bearing no such distinctive mark, must be looked upon as of less consequence, viz.:—*Cusparia*, *Cascarilla*, *Kino*, *Lobelia*, *Nux Vomica*, *Parcira-brava*, *Buchu*,

Uva Ursi, *Carraway*, and *Matico*. Again, in the second series of substances, Oxalic Acid, Carbonate of Lead, Hydrochlorate of Ammonia, Chloride of Sodium, and Dextrine, are to be kept in every pharmacy; whilst no such injunction attends Acetic, Hydrochloric, Nitric, and Sulphuric Acids, Sulphate of Zinc, Bitartrate of Potash, and Oxysulphuret of Antimony. The way in which the asterisks are distributed is likely to cause confusion. When a substance appears under two different names the asterisk is sometimes affixed to only one of them, sometimes to both: for instance, White Agaric has no distinctive mark on its first mention as *AGARIC BLANC OFFICINAL*, but as *POLYPORE DU MELÈZE*, a few pages further on, it has the asterisk. On the other hand many articles with two or three synonyms are so distinguished under each name. The want of uniformity in this respect is to be deprecated.

The ninety-five pages comprising the Materia Medica have the general title—"Substances which are employed in their natural state, or which figure in the formulæ of the Codex." They are divided into two portions: the "First Series—Substances derived from Vegetables or from Animals;" the "Second Series—Substances obtained from Minerals and Chemical Products." Thus, whilst other countries are beginning to doubt the advantage of separately enumerating the articles of Materia Medica, preferring to arrange them with the processes in one alphabetical series, the Codex not only preserves the distinction, but adopts the further sub-division above indicated. In so bulky a list, sub-division, if good in itself, might be of service, and might impart an appearance, at least, of scientific accuracy; but in the present case the result is far from happy. Animal and vegetable products, which could have been easily separated, are thrown together; and substances of mineral origin are classed with chemical products, making a second anomalous group. The running heading to the pages of this second portion—"Substances tirées des Minéraux"—would scarcely lead one to suspect that underneath would be found Benzoic Acid, Glycerine, Alcohol, and Dextrine. It brings to mind the story of the book-collector, who, for easy reference, arranged the books in his library in four divisions—calf-skin, black-letter, folio, and Latin. The same want of principle in classification produces the same confusion.

Animal products are dismissed in the preliminary remarks with a single sentence: "Animals, their parts or products used in medicine are very few in number, and are all articles of commerce; the best quality of its kind must be selected." In no portion of the Codex is the character of French pharmacy, as distinct from our own, so readily observed as in a comparison of officinal animal products; and it may therefore be worth while to treat of them separately before speaking of the vegetables with which they are associated in the work.

The British Pharmacopœia admits thirteen substances of animal origin in its Materia Medica, viz.:—*Cantharides*, *Castor*, *Cetaceum*, *Cochineal*, *Animal Charcoal*, the *Leech*, *Lard*, *Suet*, *Musk*, *Honey*, *Yellow and White Wax*, and *Ox-bile*. The Codex numbers in the same category thirty-one articles. They are as follows, with some of the more important notes appended, as they occur in the text:—

Ambre gris Intestinal concretion of the Sperm Whale.
Beurre *Butyrum*.
Bile de bœuf *Fel tauri*.
Blanc de baleine, ou Cétine .. Crystalline fatty body from sperm oil, *Spermaceti*.

**Cantharide* *Cantharis vesicatoria*, Geoff.

Observation:—"Cantharides should be chosen dry, fresh, unbroken, green: odour peculiar, penetrating and not putrid. Those should be rejected that are yellowish, broken, mixed with detached wings and legs, dust or acari; lastly it is desirable to estimate the cantharidin which they contain: a thousand parts of powdered cantharides should yield at least five parts of cantharidine."

**Castoréum* Oleo-resinous and foetid product contained in the two pouches of the genital organs of *Castor Fiber*. L.

**Cire d'abeilles* White and yellow wax.
Civet Strong smelling material secreted by the Civet and the Zibeth.

Cloporte des caves Crustacea of two species, *Oniscus Asellus* and *O. Armadilla*. The Wood-louse and the Pill Millepede.

Cochenille *Coccus cacti*.

Corail rouge	<i>Corallium rubrum</i> , Lamk.
*Corno de cerf	Hartshorn.
Microvisse	Calcareous concretions from <i>Asiacus fluviatilis</i> (fresh water cray-fish), which assist in the renewal of the shell. Vulgo, "crab's eyes."
Eponge fine	<i>Spongia officinalis</i> , Linn.
Écargot des Vignes, ou Limacon des Vignes.	<i>Helix pomatia</i> , Linn. The Vine-snail. In the South other species, <i>H. aspera</i> and <i>H. verniculata</i> , are substituted.
*Gélatine animale (pour bains)	Extract of the bones, hide, and cartilage of ruminant mammals. "Flanders glue." The pure substance is spoken of as <i>Grénatine</i> .
*Graisse de porc, Axonge, ou Saindoux.	Fat extracted from the "leaf" of the pig.
Grenouille	<i>Rana esculenta</i> , L. The Green or Edible Frog, not to be confounded with the common denizen of our English ditches, <i>Rana temporaria</i> .
*Huile de foie de Morue	Oil extracted from the liver of the cod-fish. <i>Observation</i> .—"Cod-liver oil is of very different colour according to the process which has been used in its preparation. The very brown oils which indicate the decomposition, more or less advanced, of the livers having a repulsive smell and taste, are, for that reason, less suitable for medical use. The very white oils which have been decolorized by chemical means are also to be rejected. The pale or light amber-coloured oils which indicate the rendering of the fresh livers at a temperature below 100° cent. (212° Fahrenheit) should be preferred. One gramme of cod-liver oil mixed with three drops of concentrated sulphuric acid yields a magnificent violet colour, which changes little by little and passes to a cherry red; very slowly the mixture turns to a blackish yellow."
Huitre commune	<i>Ostrea edulis</i> , Linn. The Oyster.
*Ichtyocolle, ou Colle de poisson	The material forming the air-bladder of the Great Sturgeon.
Kermès animal	<i>Coccus Ilidis</i> . A species of cochineal insect inhabiting the South of Europe, furnishing the dyeing material known as "Kermes granaux."
Lait de vache	<i>Lac vaccinum</i> . Cow's milk.
Laque (Résine)	Found in commerce in three states: stick-lac, seed-lac, and shell-lac.
*Miel	The two sorts of French honey most esteemed are the white Gatinais and the white Languedoc (Narbonne) honey.
*Musc	Secretion from <i>Moschus moschiferus</i> , Linn.
*Œuf de poule	<i>Ovum gallinaceum</i> . Hen's egg.
*Sangsué médicinale	<i>Hirudo medicinalis</i> , Linn. The Linnaean name for the Speckled Leech, which in the British Pharmacopœia appears under Savigny's name, <i>Sanguisuga officinalis</i> . It is necessary to observe this to avoid confusion with <i>Sanguisuga medicinalis</i> , Sav., the green leech.
Œsophage ou Soléche	<i>Os sepice</i> . The "cuttle-fish bone" of commerce.
Suif de mouton	Solid fat of <i>Ovis aries</i> , Linn. Mutton suet.
Vipère	<i>Vipera Berus</i> , Dand.

Ambergris and Civet are perfumery refinements scarcely essential in the treatment of disease. The so-called "Crab's eyes" had once a high reputation in this country as elsewhere, and even now their great superiority over prepared chalk and other antacids in the treatment of diarrhoea and heart-burn is upheld by some Continental physicians; the better result being attributed to their more gradual solution owing to their hard and compact texture. Milk, butter, and eggs, all useful in their way, but needless additions, one would think, to an over-long catalogue. Oysters are good anywhere; few would object to treatment, even in health, with such a remedy. Of snails, wood-lice, frogs, and vipers, as elements of *Materia Medica*, insular prejudices forbid us to speak.

The following general directions are given concerning the vegetable elements of the *Materia Medica* :—

"Vegetables, their parts or products form, on the contrary, almost the whole of the materials of organic nature which serve for the preparation of medicines. Those which are procured from commercial sources ought to be carefully chosen; those which are indigenous must be collected under the conditions of age, season, and development in which each part possesses in the highest degree their essential qualities. These conditions may be summed up in a few general propositions."

Instructions are given at some length for the collection

and preservation of the various portions of plants, of which a summary only need be reproduced here.

ROOTS.—The roots of annuals are directed to be taken a little before flowering time; of biennials during the autumn or winter after their first year's growth. The roots and rhizomes of perennial herbaceous plants are to be collected at the same season after their second or third year. Older roots are to be rejected. Those from woody perennials are to be taken from fully grown plants after the fall of the leaves. All roots are to be washed and wiped; bulky sorts are to be cut into slices; and all are to be dried, either spontaneously or in a stove, at a temperature not exceeding 50° centigrade (122° Fahr.)

BULBS AND BUDS.—Bulbs are to be collected in autumn after flowering and fruiting are finished; the dry scaly outer envelopes and the central mucilaginous portions are to be rejected, the intermediate layers are to be cut into thin strips and stove-dried. Poplar buds are to be collected in spring before they expand.

BARKS.—Indigenous barks must be gathered in the autumn after the fall of the leaves, and from adult plants. They are to be dried either in the open air or in a stove.

LEAVES AND FLOWERING-TOPS.—The leaves of inodorous plants are to be collected a little before the appearance of the flowers, in most cases they are to be stripped from the stems, but a few exceptions are mentioned in which the stalks are also to be kept. In scented plants when the leaves and flowers alike possess an odorous principle, as in the *Labiata*, the best time for collecting is just when the flowers make their appearance. When such plants have large flowering heads (racemes, panicles, etc.) they may be formed into packets, wrapped in paper, and dried spontaneously or in a stove. Two or three hours after sun-rise, on a dry morning, is indicated as the best time for gathering this class of vegetable products.

FLOWERS.—All flowers, with the exception of the Red Rose, are to be collected when they have opened, and dried between leaves of paper either in a stove or by the heat of the sun, taking care to avoid direct sun-light meanwhile. After drying they are to be cleared from dust and other contaminations on a sieve, and preserved in a well-closed box in a dry place. Red Roses are to be taken as buds just as the petals begin to open. They are to be separated from the calyces and dried like other flowers.

Certain delicate and hygroscopic flowers (e.g. Violet, Colts-foot, White-nettle, and Mullein) which cannot be kept in wooden boxes are to be preserved in bottles carefully sealed.

FRUITS AND SEEDS.—Fresh fruits ought to be selected perfectly ripe, except those whose virtue resides in the sour principle of the juice, such as verjuice. If they are to be dried they should not be quite ripe. Dried fruits (Star-anise, Cardamoms, Cevadilla, etc.) are imported in a dry condition.

The alphabetical order followed in the Codex is founded on the common French terms, not on the technical or Latin names of the substances. Owing to this circumstance, the various products of plants of the same genus, otherwise closely allied, are often widely separated. The same order has been adhered to in the following notes, excepting only in a few cases in which two or more substances have been associated on the ground of natural relationship.

ABSINTHE. No less than eight species of *Artemisia* appear in the *Materia Medica* of the Codex, *ABSINTHE GRANDE ou ALUYNE, is the common wormwood, *Artemisia absinthium*, a tonic bitter and vermifuge. *ABSINTHE MARITIME, the Sea Wormwood, *A. maritima*, has similar properties, and the dried leaves form a popular "insect powder" in the South of Europe. ABSINTHE PETITE ou PONTIQUE, *A. pontica*, is the true Roman wormwood. AURONE DES CHAMPS, *A. campestris*, the Field Southernwood. AURONE MALE ou CITRONELLE, *A. abrotanum*, is the Common Southernwood, which, in addition to being a powerful anthelmintic, is said to be largely used on the Continent in flavouring beer. ESTRAGON, *A. Dracunculus* is the Tarragon, much esteemed as a pickle, and as an addition to sauces. GENIPI VRAIE, *A. glacialis*, has similar properties to the Common Wormwood. *SEMEN CONTRA, SEMENCINE ou BARBOTINE, *A. contra*, is the well-known worm-seed.

There are still two species much used in France, though

not officinal; *A. Mutellina* and *A. spicata*, both Alpine plants. They furnish between them the bitter aromatic liqueur, known as Crème d'Absinthe.

ACAJOÛ (NOIX D'). The fruit of *Cassuvium pomiferum*, is the Cashew-nut. The pericarp is acrid, the seed itself is edible when roasted. Closely allied to it is the Marking-nut, or bean (ANACARDE ORIENTAL), the fruit of *Semecarpus Anacardium*, which is largely used in the preparation of the black varnish, or lacquer of India and China. The seeds are edible when deprived of the pericarp. Another product of the same family is the well-known Pistacia-nut (PISTACHIER), the seeds of *Pistacia vera*, the green kernels of which are esteemed for their agreeable flavour.

ACHE DES MARAIS, is celery; the root is officinal.

ACONIT FÉROCE ou BISH (Inde). *Aconitum ferox*.

***ACONIT NAPEL**, *Aconitum Napellus*. Root and leaves.

Two species of Monkshood are admitted. *A. Napellus* has the following observations appended:—

"The root of Aconite is more active than the leaves. Until the present time the leaves have been the basis of the officinal preparations. Whenever a medicine has not the tincture, or the extract of the root, specially prescribed, the pharmacist ought to employ preparations obtained from the leaves. Some persons have thought that the inequality of action attributed to preparations of Aconite, depends upon the employment, sometimes of the wild plant, which, according to them, would be more active, sometimes of the cultivated plant. This irregularity of action indicates rather, either the age of the leaves, which are not always collected at the best season, or that the mode of preparation has been defective."

AIRELLE MYRTILLE, *Vaccinium Myrtillus*, is the common Bilberry of our moors.

***ALKEKENGÉ**. *Physalis Alkekengi*, is the Winter Cherry, a familiar Solanaceous plant, whose pretty red berries are said to be diuretic.

ALCORNOCQUE, *Boudichia virgilioides*. "Alcornoco bark," an astringent tanning material.

ALLIAIRE. *Sisymbrium Alliaria*. Plant.

A considerable number of plants of the same natural order (*Cruciferae*), all of them partaking of similar warm, antiscorbutic properties, though of course in different degrees, find places in the French *Materia Medica*. The following are examples:—

COCHLÉARE. *Cochlearia officinalis*, the Common Scurvy-grass.

CRAN DE BRETAGNE, ou RAIFORT SAUVAGE. *Cochlearia armoracia*, the Horse-radish.

CRESSON DE FONTAINE. *Nasturtium officinale*, the Water-cress.

***MOUTARDE BLANCHE** and ***MOUTARDE NOIRE**. *Sinapis alba* and *S. nigra*, white and black Mustard-seed.

VELAR TORTELLE, ou HÉCHE AUX OHANTRES. *Sisymbrium officinale*, Hedge-mustard.

Most of these are common wayside plants with us and well-known in domestic medicine, so the mere enumeration will suffice.

ALOËS. Three varieties of Aloe are recognised: Socotrine, Barbadoes, and Cape. The following are the descriptions given of their peculiarities:—

ALOËS SOCOTRIN. The inspissated juice extracted from the leaves of *Aloe Socotrina* (*Liliaceae*) in the countries which border upon the Island of Socotra.

Socotrine Aloe may be either soft or dry, transparent (alods lucide) or opaque (alods hépatique). That which is dry is brittle, of a red-brown if transparent, of a liver colour if it is opaque; the odour is agreeable, analogous to that of myrrh; the taste is very bitter; the fracture is smooth and glassy; the powder is golden-yellow. This aloe is completely soluble in alcohol.

ALOËS BARBADE, ou DE LA JAMAÏQUE, is derived from *Aloe vulgaris* and *A. sinuata*.

It is solid, almost opaque, somewhat brittle, of a dull brownish or liver colour; it becomes in time almost black; it has a dull slightly granular fracture; it has a strong odour like that of myrrh, and partakes somewhat of the odour of iodine. The powder is of a dirty yellow-brown colour; it is not completely soluble in alcohol.

***ALOËS DU CAP**, is extracted from the leaves of *Aloe ferox*, *A. horrida*, *A. spicata*, and *A. linguiformis*, in the neighbourhood of the Cape of Good Hope.

It forms a blackish-brown mass with a greenish reflection on the surface. It appears opaque viewed in the mass, but in thin flakes it is transparent and of a deep red colour. The fracture is bright and glassy, the taste is very bitter; the odour strong, peculiar, and slightly agreeable. The powder is of a greenish-yellow.

Observation:—This aloe is less active than the preceding sorts; it is that which is to be employed unless ordered to the contrary.

AMBRÔISIE DU MEXIQUE. *Chenopodium ambrosioides*, L. Flowering tops; called Mexican Tea. It contains some aromatic oil, and has questionable antispasmodic qualities. Another species of *Chenopodium* (*C. anthelminticum*) appears under the name ANSÉRINE VERMIFUGE, the leaves and seeds of which are powerfully vermifuge. An oil is pressed from the seeds, "wormseed oil," possessing the same properties.

ANÉMONE DES BOIS ou SYLVIE, *Anemone nemorosa*. Leaves and flowers.

ANÉMONE DES PRÉS, *Anemone pratensis*.

ANÉMONE PULSATILLE, PULSATILLE ou COQUELOURDE, *Anemone Pulsatilla*. The Wood Anemone, the Field Anemone, and the Pasque-flower are all officinal; all possess the acrid stimulating properties of the *Ranunculaceae*. *A. Pulsatilla* is a remedy much esteemed by homœopathic practitioners.

ANETH. *Anethum graveolens*. Fruit. "Dill-seed."

The following is a list of the other aromatic fruits of the *Umbelliferae* ordered in the Codex:—

AMMI OFFICINAL. *Ptychotis fœnieulifolia*. Hone-wort, fruit used in the formula for Thériaca.

ANGÉLIQUE OFFICINALE. *Archangelica officinalis*. The Garden Angelica.

***ANIS VERT** ou ANIS. *Pimpinella Anisum*. Anise.

CARVI. *Carum Carui*. Carraway.

***CUMIN**. *Cuminum Cyminum*. Cummin.

DAUCUS DE CRÈTE. *Athamanta cretensis*.

CAROTTE. *Daucus Carota*. Carrot.

***FENOUIL DOUX**. *Fœnieulum dulce*. Fennel.

LIVÈCHE. *Levisticum officinale*.

PHELLANDRIE AQUATIQUE. *Enanthe Phellandium*. The fruit of the Water Drop-wort has poisonous properties; neither it, nor that of *Conium maculatum* come properly in the aromatic division of the *Umbelliferae*.

SÉSÉLI DE MARSEILLE. *Seseli tortuosum*. French Hartwort.

ANGUSTURE VRAIE. The bark of *Galipea officinalis*, and doubtless also that of *Galipea Cusparia*. In addition to the description of the bark, a note of caution is made in connection with the appearance at one time in trade of a false Angustura, which proved to be the bark of *Strychnos nux-vomica*.

***ARISTOLOCHE SERPENTAIRES**, ou SERPENTAIRES DE VIRGINIE. *Aristolochia Serpentaria*. In addition to this, which is our officinal species, four others occur in the Codex. *A. eymbifera*, properties similar to Serpentary; *A. Clematidis* (Birth-wort), indigenous in this country, a powerful stimulant and emmenagogue; *A. longa* and *A. rotunda*. In every case the root is ordered to be used.

***ASPERGE**. *Asparagus officinalis*. Young stems or "turions." This is known with us only as an esculent vegetable.

AYA-PANA. *Eupatorium Aya-pana*. Leaves. One of the numerous antidotes, or reputed antidotes, to snake-bites, recognised in French pharmacy. The leaves are bruised and used as a poultice, and the juice is administered internally. It is a powerful sudorific.

***BARDANE**. The roots of three species employed indifferently: *Lappa major*, *L. minor*, and *L. tomentosa*. Burdock root is much esteemed in some parts of England as an alterative, especially in syphilitic eruptions, but for many years it has ceased to be officinal in our pharmacopœias. There seems no just ground for its disuse save that fashion, on the principle of "far fetched and dear bought," points to Sarza as the remedy to be employed in such cases.

BAUME DU CANADA, Canada balsam, the liquid turpentine of *Abies balsamea*.

BAUME DE LA MECQUE, DE JUDÉE, OU DE GILEAD. The liquid turpentine of *Balsamodendron opobalsamum*, and *B. Gileadense*. This is the true Balsam of Mecca, or Balm of Gilead, a very expensive medicine, as indeed it may well be if it possesses but a fraction of the qualities attributed to it. Must be distinguished from the products of various *Coniferae* often called by the same names.

BAUME DE LIQUIDAMBAR. Is of two sorts—liquid (Oil of Liquidambar) and piciform or solid. Both are extracted from *Liquidambar styraciflua*.

*BELLADONE. *Atropa belladonna*. Both roots and leaves are official. The following note is appended:

"Observation.—The root of Belladonna ought to be recently dried and freed from the pieces of stem with which it is often found mixed."

BIGARADIER, *Citrus vulgaris*, Risso; *Citrus bigaradia*, Nouv. With us the rind of the fruit is the only portion of the Bitter Orange used in medicine. The Codex has as follows:—

*The leaf, used under the name "Feuille d'Oranger."

The flower, called "Fleur d'Oranger."

The green, unripe fruit, known as "Orangette" or "Petit grain."

The ripe fruit, which is "l'Orange amère," or "la Bigarade."

*The epicarp (rind), known under the name of "Écorce d'Orange amère ou de Curagao."

The other recognised products of the same natural order (*Aurantiacæ*) are BERGAMOTTE, the fruit of *Citrus limetta* var. *Bergamota* (rind and volatile oil); CÉDRATIER DE MÉDIE, *Citrus medica*, the citron (fruit and volatile oil); ORANGER VRAI ou à FRUIT DOUX, *Citrus Aurantium*, sweet orange (fresh fruit and the volatile oil obtained from the rind, known under the name of "Essence de Portugal"); and LIME DOUCE ou LIMETTE, *Citrus Limetta* (the fruit and the volatile oil).

CAÏCEDRA. *Khaya Senegalensis*. The bark of a plant of the Nat. Ord. *Cedrelaceæ*, used as a febrifuge in the swampy districts on the banks of the Gambia; unknown, we should have thought, in European practice.

CAILLE-LAIT BLANC, CAILLE-LAIT JAUNE. Flowering tops of two species of Bed-straw, *Galium mollugo* and *G. luteum*. These have been much vaunted recently in French periodicals for the treatment of epilepsy. Probably the whole of the Bed-straws have alterative properties. The common Goose-grass (*G. aparine*) is the only species much employed in this country, and its use has been confined to the treatment of skin diseases.

CÂNÇA. *Chiococca anguifuga*. Root. Another antidote for snake bites, as its Latin specific name implies. The bark of the root is emetic.

CAMOMILLE. Three sorts of Chamomile are recognised. CAMOMILLE COMMUNE, *Matricaria Chamomilla*, or German Chamomile ("volatile oil of a beautiful blue colour"); CAMOMILLE PUANTE ou MAROUTE, *Marula Cotula*, or Stinking Chamomile; and *CAMOMILLE ROMAINE, *Anthemis nobilis*, or Roman Chamomile, the flowers of which are stated to be double by culture.

CANNELLE BLANCHE is *Canella alba*.

*CANNELLE DE CEYLAN is Cinnamon. The following note is made relative to the essential oil: "Volatile oil of a very sweet odour, specific gravity 1.025 to 1.059, crystallizing instantly on admixture with nitric acid."

CANNELLIER (FLEURS DE). The dried flowers of *Cinnamomum Cassia*.

Observation.—The official *Flores Cassiæ* must not be confounded with the *Cassia* flowers from Grasse, which are the flowers of *Acacia farnesiana*, one of the *Leguminosæ*.

CAOUTCHOUC and GUTTA PERCHA are both inserted in the *Materia Medica* with notes on their origin.

*CAPILLAIRE DU CANADA, fronds of *Adiantum pedatum*.

CAPILLAIRE DE MONTELLIER, fronds of *Adiantum capillus-Veneris*. These two species of Maidenhair are reputed to possess expectorant and emetic properties, and whether from this reason, or on account of their peculiar and pleasant flavour, they are favourite remedies in many parts of the Continent, and form the basis of the well-known syrup called Capillaire. Ferns and their pro-

ducts are more used in France than with us. The Male-Fern, *Nephrodium filix-mas* is the only representative of the family in our Pharmacopœia; but the Codex contains in addition to it, and the two species of Maidenhair above named, two other ferns, viz., *Polypodium vulgare* (the Common Polypody) and *Ceterach officinarum* (the Sealy Spleenwort); neither of these are very potent remedies.

CAROUBIER. *Ceratonia siliqua*. The Carob or Algaroba Bean, better known in this country as the Locust Bean or St. John's Bread. The pulp is sweet and nutritious, and the beans have been largely imported of late years from the south of Spain for the purpose of fattening cattle. The seeds of the Carob tree are said to have been the originalcarat weights of the jewellers. (Lindley.)

CÉDRON. *Simaba cedron*. The cotyledons are regarded in Central America as specific in snake-bites. In this country they have only been used experimentally, and the results are sufficient to indicate considerable medicinal power. Seemann states that they have been used with success in intermittent fevers.

*CHARDON BÉNIT. *Cnicus benedictus*. St. Benedict's Thistle. Once much used in this country as a tonic, diaphoretic, emetic, and febrifuge; seldom heard of now.

CHÊNE ROUVRE et le CHÊNE PÉDONCULÉ. *Quercus robur* and *Q. pedunculata*. The fruits (acorns) are official as well as oak-bark.

*CHIENDENT OFFICINAL. *Triticum repens*. The rhizome of the Couch-grass has for some years past been much used for making a mucilaginous, saccharine decoction, valuable as a diet-drink in affections of the bladder and urinary passages.

COCA. The leaves of *Erythroxylon Coca*. For a very interesting account of their use as a stimulant indulgence, the reader is referred to Professor Johnstone's "Chemistry of Common Life."

CONCOMBRE. *Cucumis sativus*. Garden Cucumber. Both fruit and seeds are official; the juice of the fruit is an ingredient in a cooling cerate, "Pommade de Concombres." Several other products of the *Cucurbitaceæ* appear in the *Materia Medica*. The Wild Cucumber (*Momordica Elaterium*), from the juice of which "Elaterium" is prepared; *Colocynth, the fruit of *Cucumis Colocynthis*; the Red and White Gourd, *Cucurbita maxima*, and *C. Pepo*; the Calabash, or Bottle Gourd, *Lagenaria vulgaris*; and lastly, the root of the White Bryony, *Bryonia dioica*. The fruits are mostly edible, but when they have a bitter juice they are powerfully cathartic; the medicinal properties of the seeds are not so well ascertained. White Bryony root is a violent and dangerous purgative and emetic, no longer official in this country.

*COPAHU. Copaiba is described as the oleo-resinous juice of several species of *Copaifera*, amongst others of *C. officinalis*, *C. Guyanensis*, *C. Langsdorffii*, &c., and the following observations are appended:—"Pure Copaiba is liquid, transparent, of a yellow colour, soluble in all proportions in absolute alcohol. Deprived of its oil by prolonged boiling in distilled water, it leaves a dry, brittle resin. If shaken in a phial with liquid ammonia, sp. gr. .917 (2½ parts of Copaiba by weight to 1 part of ammonia), the mixture, at first turbid, becomes immediately again transparent and remains homogeneous. In respect to the property often possessed by Copaiba of becoming solid on the addition of a sixteenth part of its weight of calcined magnesia, it depends on the sort of copaiba and the length of time it has been in commerce, and is neither an indication of purity nor a mark of adulteration."

CURARE, OURARI, WOURALI, ou WOORARA. The drug with which the Indians of the Orinoco and the Amazons poison their arrows. It is of variable nature and little known; at the same time it is generally admitted that the juice of *Strychnos toxifera* forms the principal ingredient.

CURCAS. *Curcas purgans*. Seeds. The medicinal properties of the so-called Purging-nuts appear to reside in the embryo; the seeds, deprived of this portion, are roasted for food. They contain a fixed oil, which has been used in some cutaneous affections.

YCLAME D'EUROPE. *Cyclamen Europæum*. Sow-bread. The tuberous root is very aerid; a drastic purgative and emmenagogue. It is said that roasting renders the root innocuous.

DATTIER. The fruit of the Date-palm, *Phoenix dactylifera*.

PURGE. *Euphorbia Lathyris*. The root and seeds are the officinal portions of the Caper-spurge. The seeds yield a fine oil, purgative in doses of five or six drops. The root is emetic and purgative.

RAISIER. *Fragaria vesca*. Is the Strawberry; both *root and fruit are officinal.

RAMBOISIER. *Rubus idæus*. Is the Raspberry.

RÈNE ÉLÈVE. *Fraxinus excelsior*. Bark and leaves of the Common Ash.

HALIPOT. The dried resin from the trunks of some species of Pine. That collected in France is from *Pinus maritima*.

INSENG. *Panax quinquefolium*. A panacea with the Chinese; reputed to have extraordinary virtues in all diseases arising from weakness of body. European observations do not confirm this estimate. Lindley states that it is the product of *Panax Ginseng*, a different species from that indicated in the Codex.

OUDRON VEGETAL. A semi-liquid resinous product, obtained by the imperfect combustion of Coniferous wood. In France it is derived from *Pinus maritima*.

GENADIER. *Punica Granatum*. Pomegranate. The *bark of the root; the epicarp (pomegranate rind); the juice of the fruit, rich in gallic acid; the flowers called "BALAUSTE." A note is appended, setting forth the superiority of the root-bark over the other portions of the plant, as a remedy for tape-worm.

UARANA. *Paullinia sorbilis*. Guarana bread is a substance whose properties have scarcely been investigated. It is prepared by savage tribes in Brazil, from the seeds of *Paullinia sorbilis*, in the form of small round or oblong cakes. When used, the bread is pounded in water, and sweetened. It is regarded as a remedy for a large catalogue of disorders; nor is it unlikely that it should be possessed of some potency for many of the other plants of the same genus are highly poisonous.

LACHISCH. A greasy preparation, having intoxicating properties, obtained from the leaves of Indian Hemp, a variety of the Common Hemp (*Cannabis sativa*). Another substance, in the accounts of which it is hard to tell fable from fact.—Vide Johnstone's "Chemistry of Common Life."

HUILE DE CADE. A blackish liquid product, obtained in the destructive distillation of the wood of the Berry-bearing Cedar (*Juniperus oxycedrus*). It has been a good deal used in this country for some years past (under its French name) in the treatment of skin diseases.

JALAP TUBÉREUX OU OFFICINAL. *Exogonium purga*. True Jalap is stated to contain 15 to 18 per cent. of resin.

JUJUBIER. From the mucilaginous fruit of two species of *Zizyphus*, viz.: *Z. vulgaris* and *Z. jujuba*, jujubes were originally made. Gum Arabic and gelatine are now commonly substituted.

JUSQUIAME NOIRE. *Hyoscyamus niger*. The leaves of the adult plant.

JUSQUIAME BLANCHE. *Hyoscyamus albus*. Seeds.

Observation.—The White Henbane is regarded as less active than the Common Henbane; therefore, when neither species is specially designated, the leaves of the Common (black) Henbane, or a preparation of them, must be used. The seeds of the White Henbane alone are found in commerce.

ADANUM OU LABDANUM. The blackish balsamic resin collected from *Cistus creticus*.

ENTISQUE. The resin obtained from *Pistacia Lentiscus*; Mastic.

ATÉ OU THÉ DU PARAGUAY. The dried leaves of *Ilex Paraguariensis* (according to the Codex; but Martius states that those of two other species are used indiscriminately with it) form the "Tea" of Brazil and the neighbouring countries. They appear to contain theine, the active principle of our tea, and the infusion, in addition to its use as a beverage, is reputed to have diuretic and diaphoretic properties.

MENTHE. Three species of Mint are recognised, viz.: *MENTHE CRÉPUE* (*Mentha crispa*), the Curled Water-

Mint; **MENTHE POIVRÉE* (*Mentha piperita*), Peppermint; and *POULIOT COMMUN* (*Mentha pulegium*), Penny-royal.

MUGUET. *Convallaria maialis*. The Lily of the Valley. The flowers are supposed to be cephalic and sternutatory, and an extract prepared from them is purgative.

Amongst our other familiar flowers, those of the Daffodil, Primrose, White Lily, Peony, Sweet Violet, Hollyhock, Clove-pink, and White Water-lily, occur in the *Materia Medica* of the Codex, in addition to the flowering tops of the *Labiata*, which form a list too long to be enumerated.

MYROBALAN CITRIN. The fruit of *Myrobalanus citrina*, commonly used in India as a laxative. That of several allied species appears in commerce as a dyeing material.

NÉNUPHAR JAUNE. The rhizome of the Yellow Water-lily, *Nuphar lutea*, though of doubtful medicinal value, is directed to be selected carefully, to the exclusion of that of the White Water-lily.

***NICOTIANE OU TABAC.** Two species of *Tobacco* are ordered: *Nicotiana Tabacum*, which yields the American varieties; and *N. rustica*, the plant from which the Syrian sorts are derived.

NOISETTIER OU COUDRIER. *Corylus Avellana*. The Hazelnut. The oil expressed from the seeds.

NOYER COMMUN. *Juglans regia*. The Walnut. Leaves, *pericarp, oil expressed from the nut. The leaves of the Walnut have a great reputation as an anti-syphilitic, in many parts of the Continent.

***OPIUM.** Opium is defined as "the thickened juice issuing from incisions made in the unripe capsules of the Poppy (*Papaver somniferum*), of the family *Papaveraceæ*." The observations which follow are of sufficient importance to merit quotation unabridged.

"Officinal Opium is that from Anatolia, called 'Smyrna Opium.' It is in cakes, weighing 100 to 150 grammes (about 3½ oz. to 5 oz. Av.), which appear to have been each wrapped in a leaf of the poppy, and placed on a bed of *Rumex* seeds; but the cakes, on account of their softness, are always out of shape, and often many of them adhering together. This opium, when it arrives in France, is still soft, and contains from 15 to 17 per cent. of water. When carefully broken up, it appears to consist of small tears (larmes) agglutinated; kept in a dry place until hardened to the centre, it gives a brown, clean, glossy fracture, and retains about 8 per cent. of water; it preserves the strong, virulent, peculiar odour, which is characteristic of good opium; it has an acrid and bitter taste. But these are only its physical characters. The quantity of morphia ought to be ascertained: in a word, the opium should be tested. Smyrna opium ought to contain at least 10 per cent. of morphia, when in the soft state; but when hardened in the air, from 11 to 12 per cent.

"The opium above described is the ordinary Smyrna opium. Very rarely there arrives another, superior sort, which has been described under the name of *Constantinople Opium*, in balls or in large cakes, but which comes from Kara-Stissar, and from Caïmas, in Anatolia. This opium is in very regular cakes, rounded, of 200 to 300 grammes weight (about 7 oz. to 10 oz. Av.), and of a firm consistence; but it holds as much as 15 to 16 per cent. of water; it contains 13 to 14 per cent. of morphia.

"There has often been obtained in France and other countries, by the systematic incision of the capsules of the white poppy or the purple poppy of the gardens, an opium, equal in quality to the ordinary Smyrna sort. In the North of France, opium has also been extracted from a variety of the black poppy ('*Pavot willette*'); but this opium, which often contains more than 20 per cent. of morphia, ought to be preserved for the extraction of the alkaloid. On the contrary, pharmacologists ought to reject, as inferior in quality, Egyptian, Persian, and Indian opiums."

***ORTIE BLANCHE.** *Lamium album*, the White Dead-nettle.

Our two common species of Stinging Nettle (*Urtica urens*, and *U. dioica*) are also officinal under the names *ORTIE BRULANTE* and *ORTIE DIOÏQUE*. In country districts in England one still sometimes hears of "Nettle-tea" and "Nettle-beer."

***PERVENCHE GRANDE ET PETITE.** *Viola major* and *V. minor*.

The leaves of the Periwinkle, especially those of the lesser variety, have recently been used in hæmorrhages, chiefly in obstetric practice.

POLYPORE AMADOUVIER. *Polyporus ignarius* and *POLYPORE ONGULÉ, Polyporus fomentarius*. Of these two Fungi, the former is the source of Amadou or German tinder. It is prepared by beating the fungus and soaking in a solution of nitrate of potash. The latter species is used only for stopping bleedings.

QUINQUINAS. Cinchona barks are treated at greater length and described with more minuteness than any other substances in the *Materia Medica* of the Codex. The introductory paragraphs we translate entire; indeed, but for considerations of space, it would have been worth while to have treated the "observations" on the three recognised divisions similarly at length, instead of the brief summary which in no way represents the completeness of the original.

"The Cinchonas are the barks derived from trees belonging to the genus *Cinchona* of the natural order *Rubiaceæ*. They vary so much according to conditions of altitude, nature of the soil, age and exposure, that the barks yielded by trees of one species have often had different names assigned to them; the same applies to the barks which are taken from the trunk or branches of the same tree. Consequently it is often difficult to determine the origin of a bark brought in by commerce."

"For use in medicine, three sorts of Cinchona have long been admitted under the names Grey Bark, Yellow Bark, and Red Bark; but these simple appellations have the inconvenience that each of them has been applied to barks of very different nature and efficiency. Thus, under the name of Grey Bark, have been confounded the young bark of seven or eight species of Cinchona, because they all have at that age a more or less grey exterior. The name of Yellow Bark has been given to the large and medium barks of *Cinchona Calisaya*, *C. micrantha*, *C. Condaminea*, and *C. cordifolia*; lastly, the name Red Bark has been applied to those of *Cinchona succirubra*, *C. nitida*, *C. scrobiculata*, and *C. magnifolia* (or *oblongifolia*), of which the last is so completely destitute of alkaloids that it might be classed with reason amongst false Cinchonas. It is therefore necessary to define better the barks which may be usefully employed in medicine."

I. *QUINQUINA GRIS HUANUCO, Grey Bark of the English, *Cinchona micrantha*. R.P.

The characters of fine Grey Bark are carefully described and, in conclusion, the Huanuco sort is directed to be used. It is stated to contain from 1.2 to 3.6 per cent. of Cinchonine.

II. *QUINQUINA CALISAYA, QUINQUINA JAUNE ROYAL. *Cinchona Calisaya*, Weddell. Yellow Bark.

Two commercial sorts are distinguished—1st that with the periderm left on, and rolled upon itself in the form of tubes, obtained from the smaller branches; 2nd that which is stripped or deprived of its periderm obtained from the trunk and the larger branches, found in the form of plates of bark of greater or less thickness. The first sort is stated to have become rare. The second kind should furnish from 3½ to 4 per cent. of sulphate of quinine.

III. QUINQUINA ROUGE.

Of the many sorts of Cinchona known as Red Bark (*Cinchona colorada*) two only are recognised as official.

1st. The smooth (non-warty) or pale Red Bark of uncertain origin, by some attributed to *Cinchona nitida*, R.P., by others considered to be a red variety of *C. micrantha*.

2nd. Warty Red Bark furnished by *Cinchona succirubra*. Its distinctive character consists in the hard ligneous warts placed on the surface of the liber, which sometimes appear on the exterior of the periderm.

Both sorts are said to contain from 1 to 2 per cent. of Cinchonine, and from 1 to 2½ per cent. of quinine, the quantity of the latter being in inverse ratio to the former alkaloid.

Notes are given of some other bark yielding species, but the final statement is made that "the Codex admits only three official sorts of Cinchona-bark obligatory upon pharmacists, viz. :—

GREY HUANUCO CINCHONA-BARK.

YELLOW OR CALISAYA CINCHONA-BARK.

RED CINCHONA-BARK, SMOOTH OR WARTY."

RHAPONTIC. *Rheum Rhaponticum*. "*Rheum undulatum* and *R. compactum*, cultivated in France, furnish similar roots. No other species should be substituted for them."

***RHUBARBE DE CHINE.** *Rheum palmatum*. The same species, *Rheum palmatum*, furnishes two other highly esteemed qualities of rhubarb known as Russian Rhubarb and Persian Rhubarb, according to the country in which it grows or the route by which it arrives in Europe.

SCHENANTHE DE L'INDE. *Andropogon Schumanthus*: Lemon grass. A grass from which a light essential oil is extracted, having a mixed odour of rose and lemon.

SUMAC DES CORROYEURS. *Rhus coriaria*. The leaves of the Common Sumach; used largely in dyeing.

SUMAC VÉNÉNEUX consists of two closely allied species, *Rhus radicans* and *R. Toxicodendron*, which are always prescribed under their specific Latin name. The leaves are powerfully stimulant and narcotic; in larger doses, poisonous (hence the name Poison-oak). The juice is aerid, and if applied to the skin, vesicant.

TÉRÉBINTHINE. Is used as a generic term for a numerous class of analogous substances derived from the *Coniferae* and *Terebinthaceæ*, the most remarkable of which are as follows:—***TÉRÉBINTHINE DE L'ÉPICHA** (Burgundy Pitch), from *Abies excelsa*. ***TÉRÉBINTHINE DU MÎLÈZE** (Swiss Turpentine), from *Larix Europæa*. **TÉRÉBINTHINE DU PIN D'AMÉRIQUE** (American Turpentine), from *Pinus palustris*. **TÉRÉBINTHINE DU PIN MARITIME** (Bordeaux Turpentine), from *Pinus maritima*. ***TÉRÉBINTHINE DU SAPIN ARGENTÉ** (Venice Turpentine), from *Abies pectinata*. **TÉRÉBINTHINE DU SAPIN BAL-SAMIFÈRE** (Canada Balsam), from *Abies balsamea*. **TÉRÉBINTHINE DU TÉRÉBINTHE** (Chio Turpentine), from *Pistacia Terebinthus*.

TURBITH VÉGÉTAL. The root of *Ipomœa Turpethum*. A plant closely allied to the official Jalap. A very uncertain purgative.

VAREC VÉSICULEUX. *Fucus vesiculosus*. The common Bladder-wrack of our sea-coast. A year or two ago we heard much of an extract of this sea-weed as a remedy for obesity. The Codex allows two allied species—*F. serratus* and *F. siliculosus*—to be used in common with it.

In the foregoing notes it has been impossible to speak of more than a small proportion of the vegetable substances enumerated and described in the Codex, therefore selection has been made, as far as possible, of those presenting some novelty to the English reader. The products of many natural orders, *e. g.*, *Compositæ*, *Malvaceæ*, and *Labiatae* have been intentionally passed over with notice only of a few prominent species. Of the last-named family no fewer than from thirty to forty species are introduced, chiefly for the sake of their scented flowering tops, or the essential oils they yield. A mere enumeration of them would have answered no good purpose; anything more, would have occupied space better taken up in treating substances of greater medical importance.

SECOND SERIES.

SUBSTANCES DERIVED FROM MINERALS AND CHEMICAL PRODUCTS.

The physical characters and re-actions of the substances belonging to the second series are given with great minuteness. As examples of the sort of descriptions appended to the articles in this category, two or three have been selected, and the paragraphs relating to them translated entire;—such are those on Alcohol, Borax, Glycerine, and Iodide of Potassium. Except in these cases, brief notes indicating the more striking points in which this portion of the Codex differs from our own pharmacopœias alone have been thought necessary. The French alphabetical order has been preserved.

ACÉTATE DE CUIVRE BASIQUE, is sub-acetate of copper or verdigris.

ACÉTATE DE CUIVRE CRISTALLISÉ, is crystallized acetate of copper.

ACIDE CHLORHYDRIQUE. Hydrochloric acid, sp. gr. 1.18, *i. e.*

containing about 37 p.c. real acid; somewhat stronger than that of the Brit. Pharm.

ACIDE NITRIQUE. Nitric acid. Two strengths are recognised, viz., sp. gr. 1.33 = about 45 p.c. dry acid.
and 1.38 = 53 "

The London Pharmacopœia nitric acid had
Sp. gr. 1.42 = about 60 p.c. dry acid, the
Brit. Pharm. 1864 was 1.50 = nearly 80 p.c. dry acid.

***ACIDE OXALIQUE** is called also *Acide du Sucre*.

ACIDE PHÉNIQUE is Carbolic acid or Phenole.

ACIDE SULFURIQUE is the monohydrated acid, and is of similar strength to that of our own pharmacopœia, i.e., sp. gr. 1.84.

***ALCOOL.** *Espirit-de-vin*, Alcohol. (Translation.) "A limpid, colourless, very volatile liquid of a peculiar and agreeable odour, of a fresh and pure taste, leaving no residue on evaporation. If distilled water be added to alcohol, the mixture ought not to become turbid, neither ought it to acquire any foreign taste or unpleasant odour. The strength of alcohol is ascertained by means of a centesimal alcoholometer. Absolute alcohol marks 100°, rectified alcohol (spirit of wine) 85°, and weak alcohol (*Eau de vie*, brandy, proof spirit) 56°. These degrees, which are those of commerce, do not correspond with the degrees adopted in the Codex.

The centesimal alcoholometer, the degrees of which are employed in the definition of the strength of the spirit to be employed in the Codex formulæ, has been already described (*vide* CHEMIST AND DRUGGIST, March, p. 48).

BITUME DE JUDÉE. *Asphaltum*.

***BORATE DE SOUDE.** *BORAX. Boras sodicus.* (Translation.)

"In flattened hexagonal prisms, terminated by a point with three faces, and efflorescing slightly in the air; colourless, of a slightly alkaline taste, turning syrup of violets green; insoluble in alcohol of 90°, soluble in eight parts of cold water, and in two of boiling water. The solution should not effervesce with acids. A hot concentrated solution, treated by an acid, deposits abundant crystalline scales, which impart to alcohol the property of burning with a green flame."

***GLYCERINE.** (Translation.) "A syrupy liquid, resulting from the decomposition of neutral fatty bodies. Glycerine is colourless, inodorous, of a sweet taste, without acid or bitter after-taste; it does not redden litmus paper, nor turn syrup of violets green. The specific gravity of glycerine is 1.26 (30° Baumé); oxalic acid and the soluble salts of baryta produce no turbidity nor precipitate; nitrate of silver does not cause more than a slight opalescence. It ought not to change colour on the addition of sulphide of sodium, nor when boiled with caustic potash; its combustion ought to be complete, leaving no residue."

***IODURE DE POTASSIUM.** *Ioduretum potassicum.* (Translation.) "White, cubical crystals, anhydrous, of a sharp taste, soluble in less than their own weight of cold water and in six parts of alcohol of 90°; sulphuric acid liberates iodine, which colours starch-paste blue."

This salt is sometimes mixed with carbonate and iodate of potash, with the chlorides of potassium and sodium, and with bromide of potassium. Alcohol of 90° answers for separating the first two salts; as for the chlorides, they are recognised by pouring into the solution of iodide of potassium an excess of nitrate of silver, collecting the precipitate and treating it with ammonia. The chloride of silver is dissolved in the liquid, and the iodide of silver is insoluble. To prove the presence of bromine an excess of solution of sulphate of copper is poured into the solution of iodide of potassium, through this pass a current of sulphurous acid, and filter in order to separate the iodide of copper formed. The clear liquid poured into a tube with a little chlorine water becomes of a yellow colour if bromine is present.

NAPHTE is mineral naphtha. Sp. gr. .758.

SAVON BLANC, *Sapo sodicus.* Olive oil hard soap, known in commerce as "white Marseilles soap."

***SULFATE D'ALUMINE ET DE POTASSE,** *ALUN.* Potash alum. The same is official in the Brit. Pharm., but practically

in commerce ammonia alum is almost the only sort to be obtained.

***SULFATE DE MAGNÉSIE** has the synonyms *SEL DE SEDLITZ*, and *SEL D'EPSOM*.

SULFURE JAUNE D'ARSENIC, is orpiment.

SULFURE ROUGE D'ARSENIC, is realgar.

TERRE SIGILLÉE, *Terra sigillata*, belongs to the pharmacy of a hundred years ago, and has been long obsolete in this country. It is a gray or pinkish earth originally brought from Lemnos, and used to be found in commerce in round flat cakes, stamped with the seal of the merchant or dealer, hence the name.

The conclusion to which our review of the *Materia Medica* of the "Codex"—if it has been in any degree successful—must have led the reader is, that whilst this portion of the work contains a great mass of information, laboriously collected and verified by men of high eminence, it fails on the side of prolixity and over fulness; that it has scarcely been modelled in accordance with the spirit of the present day, which leads men to adopt simplicity and logical deduction in matters of medicine, in place of complexity and superstition.



NEW PHARMACY ACT.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

DEAR SIR,—Will you be kind enough, through the medium of your Journal, to call the attention of those assistants and apprentices who have not reached the full age of twenty-one, to the fact that they are the only class of the trade who will not be acted justly by in the new Pharmacy Bill that I presume will be the result of the Conference between the Pharmaceutical and United Societies.

After paying (in most cases) an enormous premium, we are told that we shall be compelled to go to further expense to pass an examination. And why? Because we are (unluckily) not twenty-one. Does this qualify an assistant? Decidedly not. Then is it fair that one portion should be subjected to examination and another not? When we signed our indentures of apprenticeship we purchased from our masters an interest in the trade by paying them a premium. Why, then, should our privileges be curtailed? I have no doubt that the majority of our masters are members of one Society or another. Is it not, then, their duty to look after the privileges we paid them for? They do not seem inclined to do so. Even the majority of the United Society have forgotten us now they have obtained the concessions they themselves require, although in their list of subscriptions may be found the names of many assistants and apprentices. I think, and others think with me, that we have not had justice done us. How can we remedy this? Only by immediate action. I propose that a petition should be got up by one of us in every town in the Kingdom, and if possible, get our masters to sign it, and forward them to Messrs. Betty, Hornby, Pass, or any other of those gentlemen who, at the London Coffee House meeting in February, seemed really to have the interest of all members of the trade at heart. If this was done, I think we should not appeal in vain. At least we might be exempted from the examination fees (which to a poor chemist's assistant is the worst part), if not from the examination itself. If we intend to do anything it must be done at once.

If you would kindly insert this in your next, you would receive the heartfelt thanks of many of the assistants and apprentices of the trade, as well as those of

Yours obediently, "JUSTUS."

[Our correspondent will find on referring to Clause 4 in the Bill, that any apprentice or assistant of two years' standing may be registered under the proposed Act. We think that it would be unwise to acknowledge the vested rights of younger apprentices, as they will have plenty of time to prepare themselves for the examination. The small fees that these beginners may have to pay, ought not to be set against the advantages resulting from the application of a test of competency.—ED. C and D.]

* Nearly equal to spirit of wine 58° over proof.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

SIR,—I was much struck in reading the address of the American chemist, Mr. Edward Parrish, published in your journal of last month; and at the risk of being thought singular, or narrow-minded, I would respectfully ask my brother chemists and druggists whether they are not rather too hot for legislation. Once set the ball in motion, where is it going to stop? I for one have grave doubts whether trade legislation is likely to benefit the majority of chemists and druggists. It is all very well for gentlemen who have first-class dispensing businesses to clamour for the incorporation of the profession, but to those who are engaged in general business in the country as I am, and who look upon their calling as a respectable trade, the advantage would be small, if any. Mr. Parrish in his excellent address, which is more to the purpose than anything I have read before, says,—

"On the subject of legal protection, my views have changed with the growth of experience. Formerly I could see many reasons for legal restrictions protecting the profession from the results of competition, and bestowing a sort of bonus upon scientific acquirements. Now it appears to me that, like all other partial legislation, this restrains, rather than promotes the great interests involved.

"Let us extend intelligence among the masses, and break down every false pretence by fair and equal competition, trusting to the good sense of the people to promote and conserve the cause of education and of the public health.

"Since, then, the claim the educated preparer and dispenser of medicine makes to the title of a professional man is but partially acknowledged by the public, and since in our time and country it is no discredit to the most accomplished man of science that he thrives through the honest pursuit of a useful trade, I, for one, am willing to abandon any such pretensions to the professional character as involve the use of a title to distinction."

Such, then, Sir, is the deliberate opinion of a distinguished American chemist upon the subject of legal protection, or incorporation. As far as regards the title or designation of the trade, I am of opinion that the good old-fashioned title of "Chemist and Druggist" is far better than Pharmaceutical Chemist, Pharmacien, or Pharmacist. The public are accustomed to call the dispensers and dealers of medicines Chemists and Druggists, and are quite unable to understand the distinction, or see the difference.

I am, Sir, very respectfully,

85, Arundel Street, Landport,
Jan. 25th, 1867.

F. STOCKMAN.

P.S.—I should like to ask the Council of the Pharmaceutical Society what they think the judges of the land would say to this. A chemist may be admitted to the membership of the Society, and yet must not call himself a pharmaceutical chemist. You may just as well admit a man to the membership of the College of Surgeons, and not allow him to call himself a surgeon. I give the Council credit for making nice distinctions; why don't they have fellows, members, and licentiates? Fellows—members by examination; Members—the present members; Licentiates—the future members they hope to have, but which I hope the law will allow me not to be one.

F. S.

[The object of the proposed Act is not to protect the profession from competition, but to protect the public from the dire results of ignorance. Chemists and druggists could not have long resisted the general demand for examined men, and they have framed a Bill to meet this demand in a way compatible with their independence. Those unexamined chemists who choose to join the Pharmaceutical Society under the proposed new arrangement will, of course, be permitted to call themselves "Members of the Pharmaceutical Society;" but if they covet the higher title of "Pharmaceutical Chemist," they must prove their right to it by passing the examination. A member of the College of Surgeons does not complain of the nice distinction that is made between a member and a fellow. There is nothing in the Bill to become a law that will compel our correspondent to join the Pharmaceutical Society. The ranks of this body will doubtless be swelled by volunteers, but the Pharmaceutical Council will have no power to act as a press-gang.—Ed. C. and D.]

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

Sir,—Have the Widows of Druggists been forgotten in the arrangements for the proposed new Act for regulating the trade? The gentlemen who met in conference do not appear to have thought of the number of ladies who might be considerably inconvenienced by an Act even a little stringent in its effects. I venture to hope the prospective widows may be allowed to employ Registered Assistants, as their interests in life do not cease with the lives of their husbands. The French law is unsuited for our adoption, at present at least, as all lady-druggists have a most undeniable "vested interest" in the property of the gentlemen to whom they consented to be married.

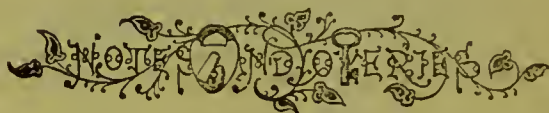
If you consider the question thus put opportune, I hope you will let it have its place in your next.

Yours faithfully,

22nd March, 1867.

L. T. B.

[The question is very opportune, as it will direct attention to Clause 16 of the Bill, by which vested interests of widows are protected.—Ed. C. and D.]



Glycerin Paste for office use may be prepared by dissolving one oz. of Gum Arabic and two drachms of Glycerin in three ounces of boiling water.

Formula for Collodion.—Dr. J. P. Maynard, who originally introduced this article to the profession, gives the following formula for its preparation, best adapted for surgical purposes:—"Take two parts of Sulphuric Acid, Sp. gr. 1.850, and one part Nitric Acid, Sp. gr. 1.450. Mix them. Allow the temperature to fall to about 100° Fahrenheit. Add to this raw cotton, to point of saturation. Let it soak about one or two hours. Pour off the acids. Wash the cotton till litmus paper shows all acidity removed. Dry thoroughly. The cotton will now be found to be converted into a gum completely soluble in Ether of about 750 Sp. gr., or in pure Ether three parts, and Alcohol 95 per cent. one part. About two ounces of cotton thus prepared will make about one pint of Collodion, of proper consistence for surgical purposes. For photographic objects a less amount will be sufficient. The conditions of success by this formula are simply precision in the details and careful manipulation, which a little experience will perfect.—*Am. Jour. Med. Science*.

Application for Chilblains.—Moisten a small piece of linen with the following, and apply it to the part, or it may be rubbed in occasionally:—Balsam of Peru, ʒss., Rectified Spirit, ʒiss.; dissolve, and add Hydrochloric Acid, ʒss., Compound Tincture of Benzoin, ʒss.; Mix. When the chilblain is broken Calamine ointment is a very good dressing.—Dr. H. S. Purdon, *Eclectic Medical Journal*.

Dr. J. Rosenberg states that by combining Ipecac. with Podophyllin the latter loses much of its unpleasant and drastic effects.—*Eclectic Medical Journal*.

White Paste which will adhere to any Substance.—Make the following mixture:—Sugar of Lead, 720 grains, and Alum, 720 grains, both dissolved in water. Mix in a dish one pound of wheat-flour, with gum water cold, till a pasty consistence. Put the dish on the fire, and pour into it the mixture of Alum and Sugar of Lead; stir well, and take it off the fire when it shows signs of ebullition. Let the whole cool, and the paste is made. If too thick, add to it some gum water, till of proper consistence.—*American Drug Circular*.

A little paraffin rubbed on ground stoppers of caustic alkali bottles perfectly lubricates the surface in contact, and prevents them getting fixed.—*Journal of Applied Chemistry*.

A good cement for cementing chemical instruments and apparatus used by pharmacists may be made with starch, glycerin, and gypsum; and will maintain its plasticity and adhesiveness longer than any other known cement.—*Ibid*.